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THE CHILD'S
GUIDE TO KNOWLEDGE.

THE
CHILD'S
GUIDE TO KNOWLEDGE,
BEING A COLLECTION
OF
USEFUL AND FAMILIAR QUESTIONS AND ANSWERS,
ON EVERY DAY SUBJECTS,
ADAPTED FOR YOUNG PERSONS,
AND ARRANGED IN THE
EASIEST AND PLAINEST LANGUAGE.
BY A LADY.
THE SECOND EDITION, GREATLY ENLARGED.

LONDON:
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1828.



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INTRODUCTION.

THE most common-place subjects, and those which occur most frequently in almost every conversation, are, by youth either totally disregarded, or but imperfectly understood.

An indifference arises from an erroneous supposition, that words and subjects so constantly in use are, in a general sense, sufficiently understood by every one, and therefore, that inquiries as to *how, where, when, &c., &c.*, would be redundant, and that particular information would be unimportant, or at least unnecessary.

To convince youth of the importance and necessity of a thorough acquaintance with such subjects, and to habituate them to inquiry, by tracing the connexion and bearing of one subject with another, is the ob-

ject which the author of this volume has in its publication.

Having been for some time accustomed to the education of children, she ever found that to produce, encourage, and satisfy an inquisitive curiosity upon every subject, was attended with the double advantage of information and amusement to her Pupils.

She is aware that the extent of this undertaking is limited, but to enlarge upon the plan, and to enter more into detail, would be to destroy the object of the work, which is, to concentrate the more important points of information; and she would affectionately recommend to her young friends, a consultation and perusal of other books which enter more at length upon the various subjects here embraced. For the success that has attended the first edition of this little book, the author is sensible that she is indebted greatly to her friends, and the sale of 1000 copies is to her a flattering testimonial that it has been well received. The present

edition has been enlarged to double the extent of the former one; and the typographical arrangement is in every respect superior.

The author cannot conclude this address without expressing the hope of meeting that reward for her labour, which of all others will be most acceptable to her—that of having been instrumental in the improvement of the youthful mind.

WALTHAMSTOW,

July, 1828.

THE
CHILD'S GUIDE
TO
KNOWLEDGE.

Question. What is the world ?

Answer. The earth we live in.

Q. Who made it ?

A. The Great and good God.

Q. Are there not many things in it
you would like to know about ?

A. Yes, very much.

Q. Pray, then, what is bread made of ?

A. Flour.

Q. What is flour ?

A. Wheat ground into powder by
the miller.

Q. What injury is wheat liable to ?

A. To three kinds of diseases, called blight, mildew, and smut.

Q. What is blight?

A. When the leaves of the plants and stalk are shrunk up and withered?

Q. What is mildew?

A. When the straw and ear are affected.

Q. What is smut?

A. When the grains, instead of being filled with grain, look black, and are full of dark brown powder.

Q. What is bran?

A. The husk of wheat. Brown bread is made by leaving bran amongst the flour.

Q. What is starch?

A. Wheat steeped in water, and exposed for some days to the heat of the sun.

Q. What does this produce?

A. A floury slimy sediment at the bottom of the water.

Q. What do they do with this?

A. Clean and dry it well in an oven, or by the heat of the sun.

Q. What is its use ?

A. To stiffen linen and muslin.

Q. What vegetable do they use instead of wheat when it is scarce ?

A. The potatoe.

Q. Is not hair powder made from starch ?

A. Yes, it is only starch ground to a fine powder and scented.

Q. What is semolina ?

A. A light and wholesome food for invalids, formed from wheat flour into small grains ; it also makes excellent puddings.

Q. What is macaroni ?

A. Fine wheat flour, mixed with white of eggs : it comes from Italy, Sicily and Germany.

Q. What does its name signify ?

A. Cut paste ; it is eaten on the Continent with milk, and in soups and puddings.

Q. How do we serve it up ?

A. In a dish with grated cheese, milk, and other things.

Q. What is vermicelli ?

A. A mixture of flour and cheese, the yolk of eggs, sugar and saffron.

Q. How is it formed into long slender threads like worms ?

A. By being forced through a number of little holes in the end of a pipe made for the purpose.

Q. Where is it brought from ?

A. Italy, and is used in soups and other things.

Q. What are oats ?

A. The seeds or grains of an annual plant well known in Europe.

Q. What do you mean by annual ?

A. Yearly, or being obliged to sow the grain, or plant it afresh every year.

Q. What are the principal uses of oats ?

A. To feed horses, and to make grits and oatmeal.

Q. What are grits ?

A. Only oats freed from their husks, much used to make gruel.

Q. What is oatmeal ?

A. Ground oats, which is made into

cakes and biscuits in the northern parts of England and Scotland.

Q. What is barley?

A. A well known kind of corn, the most valuable of all grains after wheat.

Q. Where does it grow wild?

A. In Sicily, and other parts of the south of Europe.

Q. Where is Sicily?

A. A fine island in the Mediterranean sea.

Q. What is the principal use to which it is applied in this country?

A. For the making of malt, which is barley steeped in water for three or four days.

Q. Is this all the process?

A. No, it is taken out, and lies till it begins to sprout.

Q. What is then done with it?

A. It is dried in a kiln, heated with coke, charcoal, or straw?

Q. What is coke?

A. Sea coal, burnt into a kind of cinder, used where great heat is required.

Q. What is charcoal ?

A. Wood half burnt, it is heaped up into piles or stacks, covered with turf, and as the air cannot get to it, it smothers.

Q. Is not charcoal useful in different manufactures ?

A. Yes, where a strong fire is wanted without smoke.

Q. What is the use of malt ?

A. To make ale and beer: hot water is added to the malt; the liquor thus produced, after it has remained some time, is drawn off and called wort.

Q. What is next done ?

A. It is then boiled with some hops, which give it a bitter taste, and keeps it sweet and good; afterwards it undergoes fermentation, and is put into a cask.

Q. What do you mean by fermentation ?

A. It means a working, which produces a peculiar sour, over-ripe flavour.

Q. How is that flavour removed?

A. ~~By boiling, which after three or four days~~ subsides of itself, the cask is then stopped down, and the beer becomes clear and drinkable.

Q. Is it not requisite for all beer and wine to ferment?

A. Yes, and yeast is used to assist it.

Q. What is yeast?

A. The fermentation of malt.

Q. Are there not several degrees of fermentation?

A. Yes, the first degree is vinous or spirituous, the second acid or sour, and the third putrid.

Q. What are hops?

A. The dried flower buds of a most beautiful plant, which grows twining round long poles.

Q. Where are the principal hop grounds?

A. In Kent, and near Farnham in Surry.

Q. What is porter?

A. A liquor made of malt and hops, fermented with yeast.

Q. What is pearl barley ?

A. It is barley freed from its husks, and formed into round grains about the size of small shot, of pearly whiteness, which has given it the name of pearl barley.

Q. What is sago ?

A. The inner pith of a species of palm-tree, growing in the Moluccas and Ceram.

Q. Where are these islands situated ?

A. In Asia, between New Holland and China.

Q. How is it prepared for use ?

A. The tree is sawn into pieces, the pith taken out, and ground to a fine powder.

Q. What is then done with it ?

A. It is rubbed through a fine hair sieve, mixed with water, into a thick paste, and dried in a furnace.

Q. What is tapioca ?

A. A fine flour prepared like sago, into small grains, from the root of a South American plant called cassava.

Q. For what is it used ?

A. It affords a nourishing food, and is made into jelly, puddings, &c.

Q. What is rice?

A. The seed of a grass-like plant, that grows in Asia, and in some parts of America.

Q. What country produces two crops every year?

A. China; they sow it in March and July.

Q. What does this plant require?

A. A great deal of water.

Q. Is it not the principal food of the lower class of people in Asia?

A. Yes.

Q. To whom were the Americans indebted for this grain?

A. To a Mr. Dubois, treasurer of the East India Company, who gave a small bag of this grain to a merchant of Carolina.

Q. Are we not at present chiefly supplied from America with rice?

A. Yes, and the Carolina rice is much the finest, the grains being double the size of that which comes from the East Indies.

Q. What very strong spirit is obtained from rice ?

A. That called arrack is partly made from it, being also mixed with toddy, which is the juice of the cocoa-nut tree.

Q. What is millet ?

A. A small seed brought into this country from the East Indies, chiefly used for puddings ; it is also an excellent seed for fattening poultry.

Q. What is butter ?

A. It is made from cream by churning.

Q. What is cream ?

A. The richest and lightest part of milk ; it collects on the top, and is skimmed off and churned into butter.

Q. What is cheese ?

A. Milk or cream curdled, by being warmed and mixed with rennet.

Q. What is rennet ?

A. The stomach of a sucking calf, well cleaned and filled with salt ; a certain quantity of this brine is poured into the warm milk, which it curdles.

Q. How is the cheese made into the shape we see it in ?

A. The curds are pressed as dry as possible, salted, put into shapes, and again pressed down tightly to form a cheese.

Q. Which is the richest English cheese ?

A. That called Stilton, which is made in Huntingdonshire, Leicestershire, Rutland, and Northamptonshire; it owes its excellence to the rich pastures in which the cows are fed.

Q. Which is the most celebrated foreign cheese ?

A. That called Parmesan, which is made of a mixture of ewes' or goats' milk, with that of the cow.

Q. From whence does it come ?

A. From the neighbourhood of Parma, and from various parts of Italy.

Q. What is tea ?

A. The dried leaves of an evergreen shrub which grows in China, Japan, and Siam.

Q. Where are these places ?

A. In Asia.

Q. What is the difference between green tea and black tea?

A. It is generally believed that there is but one species, the difference depending on the seasons when gathered, the nature of the soil, culture, age, and manner of drying.

Q. Is it a plant of slow growth?

A. Yes, it must have reached three years' growth before any leaves are fit to be plucked, which it then bears in plenty, and very good ones; it does not exceed a man's height in seven years.

Q. Which are the principal black teas?

A. Bohea, Congo, Souchong, and Pekoe.

Q. What is Bohea, or Voo-zee.

A. The lowest quality of black tea, so called from the country in which it is produced; it is a mixture of small and large leaves.

Q. How are they prepared for use?

A. As the leaves are picked, they

are put into flat baskets, placed in the sun or air from morning till night, after which they are thrown by small quantities into a cast-iron pan, which is made very hot.

Q. What is then done?

A. They are twice stirred with the hand, then taken out, and rubbed between men's hands to roll them; after this they are roasted again in larger quantities, and sometimes are put into baskets over a charcoal fire.

Q. When the tea is sufficiently dried what is done with it?

A. It is spread on a table, and the leaves that are unrolled, yellow, broken, or too large, are picked out, the rest are packed for sale.

Q. What is Congo, or Cong-foo?

A. A superior kind of bohea, less dusty, with larger leaves; they are gathered with peculiar care, and are said to be beaten with flat sticks or bamboos, after they have been withered by the sun or air, and have acquired toughness enough to keep them from breaking.

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Q. What does the word Congo signify?

A. It means, in the Chinese, “*much care or trouble.*”

Q. What is Souchong?

A. It signifies, in the Chinese, a *small good thing*; very little true Souchong is sold in Europe.

Q. Why?

A. Because, among a whole plantation, there may only be found one single tree, the leaves of which are thought good enough to be called Souchong, and even of these, only the best and youngest are taken.

Q. What is Pekoe?

A. A tea chiefly drank in Sweden and Denmark; it is made from the tenderest leaves of trees three years old, gathered just after they have been in bloom, and has some of the small white flowers of the tree mixed with it.

Q. What sort of a flower does the tea shrub bear?

A. It is like our wild white rose,

and its root is like that of the pear tree.

Q. Which are the principal green teas?

A. Singlo, Hyson, and Gunpowder.

Q. How is it generally thought that green tea is prepared?

A. The leaves are immediately roasted after being gathered, then thrown upon cast iron plates and very much rubbed betwixt men's hands to roll them tightly.

Q. Is this all the process?

A. No, they are picked, cleansed from dust, several times roasted, and at last put hot into the chests in which they are packed.

Q. What does the name Singlo signify?

A. The tea is so named from the place in which it is cultivated.

Q. What is Hyson tea?

A. It has its name from that of an Indian merchant, who first sold this tea to the Europeans.

Q. What is Gunpowder tea?

A. It is a superior kind of hyson; gathered and dried with peculiar care; it is chosen in round grains, and looks like small shot, and has a beautiful bloom, which will not bear the breath.

Q. Who first introduced tea into Europe?

A. A Dutch merchant, in 1610, who got it from the Chinese by exchanging dried sage with them.

Q. Were they not very fond of this herb?

A. Yes, they called it the wonderful European herb, attributing to it numerous virtues.

Q. But in which of our kings' reigns did the East India Company give the first order for tea?

A. In that of Charles II. in 1669, it consisted only of two canisters, weighing 143lb. and was sold at fifty shillings a pound.

Q. What is the quantity now sent every year from China?

A. Upwards of twenty millions of pounds weight.

Q. How do the Japanese use their tea?

A. They grind it to powder as we do coffee.

Q. Is not their manner of serving it curious?

A. Yes, they place before the company the tea equipage, and a box, full of finely powdered tea.

Q. What follows?

A. The cups are then filled with warm water, and as much powder as will lay on the point of a knife is thrown into each cup, and stirred till the liquor begins to foam.

Q. Is it then presented to the company?

A. Yes, who sip it while warm: this custom prevails in many parts of China.

Q. What is sugar?

A. The juice of a certain cane, first brought from China to the West Indies, where it now flourishes.

Q. Where are the West Indies?

A. A set of islands between North and South America.

Q. What sort of a plant is the sugar cane?

A. It is like a tall stick, with a bunch of green leaves at the top, in the middle of which is a flower.

Q. How do they make sugar of this?

A. When the leaves begin to hang and look dead, they cut down the cane and carry it to the mill to be crushed.

Q. What is the mill?

A. It consists of three wooden rollers, covered with steel plates, which press and squeeze out the juice.

Q. What is then done with it?

A. It is boiled six times, and then barrelled, and sent to England.

Q. Is it then fit for use?

A. No, it must be boiled again with white of eggs, and other things to clear it, after which it is fit for use.

Q. How do they make lump sugar?

A. By pouring the juice, thus cleared, into shapes, and baking it till quite hard.

Q. What is treacle, or molasses?

A. The coarse remains of the sugar syrup.

Q. What is sugar candy?

A. It is sugar, boiled and cleared till it becomes thick ; it is then poured over sticks, or strings, placed across small tubs, and baked in a very hot stove.

Q. What is barley-sugar?

A. It is also sugar boiled in water, to which lemon peel is added; and then it is rolled, and twisted into sticks.

Q. Is not the juice of the sugar plant very healthy?

A. Yes; every creature, whether man or animal, during the sugar harvest, appears to derive benefit from its use, and become fat and healthy.

Q. Have you told me all that is done with sugar?

A. No; rum is distilled from the molasses, or coarse part of sugar, which is skimmed off when boiling.

Q. What is coffee?

A. The berry of an evergreen shrub, which grows in Arabia, and the East and West Indies.

Q. Where is Arabia?

A. In Asia.

Q. What sort of a berry is it?

A. When ripe it is red, and not very unlike our cherry; they are then gathered, and dried on mats placed in the sun.

Q. What does this cause?

A. The outer pulp, or skin, to be easily removed with the help of mills, afterwards the berries are again dried.

Q. What else must be done to it?

A. It must be roasted, ground, and boiled in water, it is then a delightful drink.

Q. In which West India island was coffee first planted?

A. In Jamaica.

Q. How much coffee does one tree produce?

A. Not more than a pound, but a tree in great vigour will produce three or four pounds.

Q. Who first introduced it into England?

A. Mr. Daniel Edwards, a Turkey merchant, in 1652; he brought with him a Greek servant of the name of

Pasqua, who understood the method of roasting the berries, and making it into a drink.

Q. Where was the first coffee house opened in London?

A. By this Pasqua, in George-yard, Lombard street.

Q. What is cocoa?

A. The kernel of a nut, which grows in South America.

Q. What is chocolate?

A. A kind of cake or hard paste, which is made of the pulp of the cacao or chocolate nut, mixed with sugar, cloves, cinnamon, and other spices.

Q. Where does the chocolate tree grow?

A. In America and the West Indies; the flower is very beautiful; its fruit is contained in a pod like a cucumber in shape; each pod has twenty or thirty nuts in it, something like almonds.

Q. How are those nuts prepared for use?

A. They are cut into slices, laid

on skins, and dried in the sun, gently roasted, pounded in a mortar, and ground.

Q. How is it formed into a paste and cakes?

A. By the help of water, and whilst hot is put into tin moulds.

Q. Who introduced chocolate into Europe?

A. The Spaniards; the best is brought from the Caraccas; it should be used new, for it will not keep more than two years.

Q. Where are the Caraccas?

A. Islands in the Caribbean sea.

Q. What are nutmegs?

A. The kernels of a fruit, which grows on a large handsome tree, in many of the East India islands.

Q. Where are the East Indies?

A. In Asia.

Q. Like what common English fruit is the nutmeg?

A. Like a walnut, being enclosed in the same sort of spongy coat, which is stripped off in the woods.

Q. Does not this husk open at one end when the fruit is ripe?

A. Yes, and when this coat is taken off, a very fine scarlet net-work is seen, which is called mace.

Q. Does it keep this fine colour.

A. No, after it is exposed to the sun and dried, it turns to a yellowish colour.

Q. What is cinnamon?

A. The dried under bark of the branches of a tree.

Q. Where does this tree grow?

A. Principally in the island of Ceylon, and forms one of the chief articles of its trade; but it also grows in Malabar, and other parts of the East Indies.

Q. Where is the Island of Ceylon?

A. In Asia, at the entrance of the gulf of Bengal.

Q. How often do they strip the cinnamon trees of their bark?

A. Twice a year; they rip up the bark with a knife, then cut it into slices, which curl up in drying, and

the smaller pieces are slipped into the larger ones.

Q. Are there not persons who taste and chew it, to examine its quality?

A. Yes, and it is very disagreeable work, few can do it for more than two days together, as it deprives the tongue and lips of all moisture.

Q. Is the bark of the cinnamon tree the only part that is valuable?

A. No, the leaves, fruit, and root, all yield oil of considerable value.

Q. What did they formerly make of the oil from the fruit?

A. Candles, for the sole use of the king; their smell was delightful.

Q. What are cloves?

A. The flower-buds of an East Indian tree, growing in the Molucca islands.

Q. Did not the Dutch take great pains to cultivate it?

A. Yes; and they carried on a very rich trade in this article with the rest of the world.

Q. What is pepper?

A. The dried berry of a creeping kind of shrub.

Q. Where does it grow ?

A. In many parts of the East Indies.

Q. How do these berries grow ?

A. In clusters, from twenty to thirty grains, somewhat like a bunch of currants.

Q. What colour are they ?

A. First green, but they change to a bright red when ripe, and after they are dried they become black.

Q. Is black and white pepper the fruit of the same shrub ?

A. Yes, the berries are only dried for black pepper ; but for white pepper, the best and soundest of the berries are chosen, steeped in sea water, and dried in the sun.

Q. What does this cause ?

A. The skin to shrivel, which is then easily rubbed off by the hand, and leaves the berry white.

Q. What is all-spice ?

A. The fruit of the beautiful pimento tree.

D.

Q. Where does it grow?

A. In Jamaica, and other parts of the West Indies.

Q. Why is it called all-spice?

A. Because it is thought to possess the flavour of all the other spices.

Q. What is ginger?

A. The dried root of a reed-like plant?

Q. Where does it grow?

A. At Calicut, and many other places in Asia, and in the West Indies.

Q. What plant does it resemble?

A. A rush, and the knotty root spreads itself over the surface of the ground?

Q. How do the Indians use it?

A. When fresh gathered it is soft, and in that state it is eaten by the Indians as a salad.

Q. Does it not likewise make a fine preserve?

A. Yes, a most delicious one, and it is reckoned a great delicacy.

Q. What is mustard?

A. It is made from the powdered

seeds of a plant which grows wild in most parts of England, but is cultivated with great success at Durham.

Q. What is the betel leaf, which we hear so much of the Indians chewing?

A. It is the leaf of a creeping plant, not unlike ivy; they eat it in such quantities, that their lips become quite red, and their teeth black.

Q. Do they not consider this a beauty?

A. Yes, and they carry it about their persons in boxes, as we do snuff, and present it to each other; this is done by women as well as men.

Q. Would they not consider it a great rudeness if you refused it?

A. Yes.

Q. What are anise-seeds?

A. The seeds of an annual plant which grows wild in Egypt, Syria, and other Eastern countries.

Q. Did we not try to cultivate this plant in this country?

A. Yes, but our climate was too

cold, and we get them from Malta and Spain; they are very valuable in medicine.

Q. What are cardamoms?

A. The seeds of an East Indian plant, which are brought into Europe in their pods, and are very valuable in medicine.

Q. Do not the Indians use them in great quantities in their food?

A. Yes; and they also mix them with betel, and chew them.

Q. What are caraway seeds?

A. A small, well known seed, much used by pastry cooks in cakes, and very useful in medicine.

Q. Does not this plant grow wild in many parts of England?

A. Yes, particularly about Bury St. Edmunds, in Suffolk, and it is much grown in Essex and Kent.

Q. How do they thresh it?

A. In the field on a cloth, in the same manner as rape seed.

Q. What are coriander seeds?

A. The seed of a plant much grown

in Essex and Kent, and used by distillers, druggists, and confectioners.

Q. What is turmeric ?

A. The root of an East Indian plant like ginger, used in India and Europe, in medicine, and in making curry powder, and seasoning many other dishes.

Q. What is it chiefly valuable for now ?

A. For giving a rich yellow dye to silks, and linen, and improving the fine red dye of cochineal.

Q. What is arrow root ?

A. The root of a plant growing in the East and West Indies ; it goes through a long preparation, and in the state we see it, looks like a fine starch.

Q. From whence does it derive its name ?

A. From the Indians using its juice for the cure of wounds made by poisoned arrows, and for the stings of venomous insects.

Q. What is maize, or Indian corn ?

A. A grain much cultivated in Ame-

rica, for it yields two crops in the year, and is used for bread, puddings, cakes, &c.

Q. What is saffron?

A. The orange coloured petal, or centre part of a purple kind of crocus; the flowers are gathered every morning just before they open.

Q. What part of them is used?

A. The upper part of the petal is picked out, and the rest of the flower thrown away; they are dried in a kiln and made into cakes.

Q. Where does this plant abound?

A. In Cambridgeshire, where there is a town called Saffron Waldon, from the quantity which grows in the neighbourhood.

Q. What is the use of saffron?

A. A yellow colour is prepared from the saffron plant, used in dyeing, and is valuable in medicine, as it dissolves in water.

Q. What is the orris root?

A. A root well known from its delightful smell, which is like the violet;

it is used to scent hair powder and other articles.

Q. From whence is it brought?

A. Chiefly from Leghorn, in Italy.

Q. What is liquorice?

A. The root and juice of a plant which grows in abundance in England.

Q. In what part does it abound?

A. Whole fields of it are to be seen in the neighbourhood of Pontefract, in Yorkshire?

Q. What is Spanish liquorice?

A. Only the root and juice of the same plant, growing in great quantities in Spain.

Q. Where is Spain?

A. In Europe.

Q. Is not a great quantity of liquorice used in brewing London porter?

A. Yes.

Q. What is wine?

A. The fermented juice of grapes and vegetables.

Q. What causes the great variety in the colour and quality of wines?

A. The different species of grapes,

produced by the varieties of soil, cultivation, and climate, and the peculiar mode of fermentation.

Q. What causes the difference between red wine and white?

A. Not so much in the quality of the grape as in the preparation.

Q. How does this occur?

A. If the juice of the red grape is carefully pressed, and fermented separately from the skins, it forms a white wine.

Q. But I suppose if the skins are pressed, and remain during fermentation, the wine is red?

A. Yes, but there are white grapes as well as red, which also cause a difference in wine.

Q. What wine is most consumed in England?

A. That called red port.

Q. Where does this wine come from?

A. Oporto, a rich and handsome town in Portugal, it has its name from the city, in the neighbourhood of which the vines are cultivated.

Q. Is there not a wine called white port ?

A. Yes, it comes from Portugal, and was some years ago much used ; but now it is seldom called for.

Q. What is Lisbon ?

A. A sweet white wine produced near Lisbon, the capital of Portugal.

Q. From whence does Madeira come ?

A. From the Madeira and Canary islands in the North Atlantic Ocean, off the coast of Africa.

Q. Is it not considered by far the most valuable white wine ?

A. Yes, particularly after it has been ripened by a voyage or two to the East Indies, it is then called East India Madeira.

Q. What is Malmsey Madeira ?

A. A rich luscious white wine brought from the Canary islands ; it used to be called Canary sack, and is much spoken of in Shakespear.

Q. Where did the vines grow which produced this fine wine ?

A. In Candia, and in Malvesia, one of the Greek islands; it was afterwards transplanted to the Canary islands.

Q. Is much of this wine made?

A. No, it is so scarce that few persons possess it.

Q. What prince was drowned in a butt of Malmsey wine?

A. The Duke of Clarence, brother of Edward IV.

Q. Where is Candia?

A. An island in the Mediterranean sea.

Q. What is sherry?

A. A strong white wine brought from Xeres, not far from Seville, in Andalusia in Spain.

Q. What is tent wine?

A. A sweet red wine, which comes chiefly from Cadiz, but there is a very rich and excellent red wine produced in Alicant, which is called tent or tinto.

Q. Is not tent wine made from the juice of a particular kind of grape.

A. Yes, and they are not used for the wine until some time after they have been perfectly ripe.

Q. Does not Germany produce many excellent wines?

A. Yes; Tokay, Hock, Rhenish, and Moselle, are the most celebrated.

Q. What is Tokay?

A. A very scarce and expensive wine, brought from a town of the same name in Hungary, near which it is chiefly made.

Q. What is the hill called that produces the grapes of which this wine is made?

A. The Sugar Hill; the common grapes are mixed with a portion of luscious, half-dried, shrivelled grape, which grow on this hill.

Q. What renders it so scarce?

A. The small quantity that is made of it, and its being principally bought by the nobility of Hungary.

Q. What German wine is in the greatest request in England?

A. Hock; it has its name from the town of Hockstadt, in Swabia, and is a pleasant wine in summer.

Q. What is Rhenish and Moselle?

A. They are produced chiefly on the banks of the Rhine and Moselle rivers, and have a cool, sharp taste.

Q. Are not the Germans very curious in their wines ?

A. Yes : before the late wars, many of the nobility had wines in their cellars that were more than a hundred years old.

Q. Had they not lost all their goodness ?

A. No ; they had been made so rich and good, that they remained uninjured, even by so great an age.

Q. Are not the French wines celebrated ?

A. Yes ; the most valued is Champagne, it is of two kinds, still Champagne, and sparkling Champagne.

Q. What is still or quiet Champagne ?

A. The wine that has gone through the whole process of fermentation.

Q. What is sparkling Champagne ?

A. That which has been bottled before the fermentation was complete.

Q. What is Vin de Grave?

A. A French wine, made near Bourdeaux.

Q. What is Pontac?

A. Another French wine, made in Guienne.

Q. What are Frontignac and Muscadel?

Q. White wines, the delicious productions of Languedoc.

Q. From what is the name Muscadel derived?

A. Some suppose from the grape having a little of the flavour of musk, and others from *Musca*, a fly, because the flies are extremely fond of its grapes.

Q. What is Burgundy?

A. A fine red wine, which has its name from the province where it is made.

Q. What is claret?

A. A thin, highly flavoured red wine, much drank and esteemed in England.

Q. Where does it come from?

A. The neighbourhood of Bourdeaux.

Q. What is hermitage ?

A. A red wine produced from vineyards on the east banks of the Rhone.

Q. What town in France is famous for this wine ?

A. The little town of Tain near Lyons ; it is made from a small black grape of a rough flavour.

Q. What is Côte Rotie ?

A. A wine made from the vineyards on the opposite side of the river Rhone.

Q. What is Rota wine ?

A. A rich and sweet white wine, produced in Rota, in Seville.

Q. Pray is Italy famous for wine ?

A. It was among the ancients, but now their wines are thin and bad.

Q. Does it not produce one good sort ?

A. Yes, that called Lachryma Christi ; it is a luscious red wine, produced from the vineyards on Mount Vesuvius.

Q. What is Falernian wine ?

A. It was a wine much celebrated

by the ancient poets, particularly Virgil and Horace.

Q. What part of Italy produced it.

A. Falernus, a fertile mountain and plain of Campania, a part of Italy in which Rome is situated.

Q. What is Constantia ?

A. A very rich sweet wine, made at the Cape of Good Hope.

Q. Is there not red and white Constantia ?

A. Yes, it is made about eight miles from Cape town, at a farm of the same name.

Q. What causes the grapes of this farm to be so very fine ?

A. Some peculiarity in the soil; the wine is made with great care, no fruit being used but what is fully ripe, and in the highest perfection.

Q. When is this wine in perfection ?

A. In about two years ; when kept six or seven it ferments and loses its flavour.

Q. What is Schiras wine ?

A. A very fine Persian wine, very

much esteemed : the town is delightfully situated in a fertile plain, and contains so many beautiful gardens, as to be styled an earthly paradise.

Q. What is noyeau ?

A. A delightful cordial, made of white brandy, and sweet and bitter almonds, with other kernels.

Q. Where is the finest made ?

A. At Martinique, one of the West Indian islands.

Q. What is brandy ?

A. A spirituous liquor, distilled from wine.

Q. Whence have we the finest ?

A. From Bourdeaux, Languedoc, and Anjou ; from the latter comes the well-known cogniac brandy.

Q. What is the colour of brandy when it comes from the still ?

A. White as water ; it is coloured partly by the oaken casks in which it is kept, and partly by burnt sugar, and other harmless things.

Q. Do these things affect the quality of the spirit ?

A. Not in the least.

Q. What is gin ?

A. A spirit made of the oil distilled from the berries of the juniper tree.

Q. From whence are juniper berries imported ?

A. From Holland and Italy.

Q. What is cider ?

A. The fermented juice of apples.

Q. What county is particularly famous for cider ?

A. Herefordshire.

Q. What is Perry ?

A. The fermented juice of pears.

Q. What counties are famous for it ?

A. Worcestershire and Herefordshire.

Q. What is vinegar ?

A. An acid liquor made from malt, but wine, beer, cider, &c., may be turned into vinegar, by exposing the vessel to the hot sun.

Q. What is mead ?

A. A liquor made from honey and water, fermented with yeast.

Q. What is honey ?

A. The syrup of flowers, drawn from the opened buds by the industrious bee.

Q. What is virgin honey?

A. The honey made by the young bees, which is purer than any other.

Q. What is manna?

A. A sweet syrup, or sap, that flows from several kinds of ash trees, as gum does from plum trees.

Q. How is it prepared?

A. It hardens and dries on the tree like gum, when it is carefully gathered.

Q. Where does the best come from?

A. Calabria and Sicily.

Q. Where is Calabria?

A. It is a country of Italy, in the kingdom of Naples.

Q. What animals furnish man with milk?

A. The cow, the goat, and the ass.

Q. Where is goats' milk particularly valuable?

A. On board a ship, where the goats thrive better than any other animal.

Q. What is asses' milk good for?

A. It is light and nourishing, much drank by sick persons and children.

Q. Whence are oranges brought?

A. From Majorca and Minorca, also Lisbon, and most of the islands and places in the Mediterranean sea.

Q. How many oranges will a good tree bear?

A. From 1000 to 2000.

Q. What story is related concerning the first orange tree, which was the parent of all the multitudes now in Europe?

A. It was the only plant that lived out of a great number, sent as a present from Asia to the Conde Mellor.

Q. Who was he?

A. Prime minister to the king of Portugal.

Q. What well-known perfume is made from the rind of the orange?

A. Bergamot; it is near the town of Bergamo, in Italy; the rind is cut into small pieces, and the oil pressed out into glass vessels.

Q. What are Seville oranges?

A. A large, bitter, dark-coloured, and rough-skinned orange, much used in medicine and cookery.

Q. What is the shaddock?

A. A fruit of the orange kind, as large as the head of a child, common in both the East and West Indies.

Q. From whom does it derive its name?

A. From a Captain Shaddock, who brought it from China, or, as some say, from Guinea, and planted it in the West Indies.

Q. Whence have we lemons?

A. Principally from Spain and Portugal.

Q. What country is the lemon tree a native of?

A. Assyria and Media, in Asia; they were first planted in Greece, and afterwards in the southern parts of Europe.

Q. Is it not a delightful acid?

A. Yes, and much used in cookery, confectionary, and medicine.

Q. Are they not also much used by calico printers?

A. Yes, to discharge the colours formed from iron.

Q. What is essential salt of lemons?

A. It is a preparation made from the juice of sorrel, used for taking out ink stains from linen.

Q. What kind of fruit is the citron?

A. A sort of lemon, only larger, and the pulp firmer; it is principally used in sauces.

Q. What is the lime?

A. A kind of lemon, though a much smaller fruit, about the size of an egg; the juice is much preferred to the lemon.

Q. Where do they grow?

A. In North America and the West Indies, where they are to be seen at all entertainments.

Q. Have not all the fine vegetables and delicious fruits we now enjoy in England, been introduced into it from other countries?

A. Yes, it was not until the latter end of the reign of Henry VIII, about 1547, that sallads, carrots, turnips, cabbage,

and other eatable roots, were produced in England.

Q. What countries furnished England with vegetables before she cultivated them ?

A. Holland and Flanders : the court was tolerably supplied, but the rest of the country scarcely knew the taste of them.

Q. Is not the potatoe one of the most useful roots we possess ?

A. Yes, it forms the principal food of most of the poor in this country, but in Ireland they chiefly live upon it.

Q. To what country are we indebted for such a valuable plant ?

A. It has been said Sir Francis Drake first brought it from Santa Fé, in New Mexico, North America.

Q. But what great man is said to have first planted them in Ireland ?

A. Sir Walter Raleigh, at Youghall, in the county of Cork, in 1610, in the reign of James I.

Q. What county in England is thought to excel in this vegetable ?

A. Lancashire : Formby, a few miles north of Liverpool, is remarkable for producing the best in the county.

Q. What old story is related with regard to this ?

A. It is said that a vessel, laden with potatoes, from Ireland to London, was driven on shore at Formby, and occasioned them to be first planted at that place.

Q. When were asparagus, artichokes, cauliflowers, beans, and peas introduced ?

A. About the time of Charles II.

Q. What is sour-cROUT ?

A. It is prepared from all kinds of cabbage, and is a favourite food among the Germans, and people of other northern countries on the continent.

Q. Were not the Greeks and Romans well acquainted with these plants ?

A. Yes, and they were much used and cultivated by them.

Q. Are not turnips a most useful vegetable ?

A. Yes, they were brought into this country from Hanover and Germany.

Q. In what county are they now much cultivated?

A. In Norfolk; but in all parts of England they are grown, as they afford such fine food for sheep and cattle.

Q. What are truffles?

A. A fungus without root, which grows at the depth of four or five inches in the earth, from the size of a pea, to that of a potatoe.

Q. How are they discovered?

A. By means of dogs, which are taught to hunt for them by scent, and when they smell one, they bark, and scratch it up; in Italy they are hunted for by pigs.

Q. How are they served at table?

A. Either roasted in a fresh state, like potatoes, or cut into slices and dried, to flavour sauces and soups.

Q. It does not appear then that our island possessed many native fruits?

A. No; nuts, acorns, and crabs were the only fruit of the island.

Q. From what place had we the apple?

A. From Persia; it is produced in an artificial manner, by a process termed grafting.

Q. What is grafting?

A. It is inserting young shoots of such trees as bear valuable fruit, into a crab stock, which is plastered and bound up, till it grows to it.

Q. Will it then produce fruit of the same quality as the tree from which it was taken?

A. Yes: and this process is used for propagating nearly every kind of fruit tree.

Q. What do you mean by propagating?

A. Increasing.

Q. Why do they not raise them from seed?

A. Because they would only be like wild fruit, and never come to perfection.

Q. Is the pear much cultivated?

A. Yes: it is a well known garden

fruit, the wood is light and smooth, of a yellow colour.

Q. What is it useful for?

A. Picture frames that are to be stained black; carpenters' and joiners' tools; also the common kind of flat rulers.

Q. What country produced the pine?

A. This best and finest flavoured of all known fruits, was brought to England in 1690, from South America.

Q. Where do they grow in great perfection in the open ground?

A. In South America and the West Indies.

Q. How do we raise this fine fruit in Europe?

A. In hot-houses, they are a luxury for the rich, the pots which contain them are sunk in beds of bark, after it has been used by the tanners.

Q. When is this fruit in perfection?

A. From the middle of August to the end of September; when brought to table, their leafy crowns should be saved for planting.

Q. What country produced the peach?

A. Persia : it was so tender a fruit, that for many years, of all the Roman provinces, it grew no nearer than Egypt.

Q. But is it not now universal in Europe?

A. Yes : as well as the nectarine, which is a smooth skinned variety of peach, but of a richer, and more delicious flavour.

Q. Where did the apricot and the quince come from?

A. Epirus, Carthage, Armenia, and Syria.

Q. Where is Epirus?

A. In Greece.

Q. Where is Carthage?

A. In the north of Africa, Queen Dido founded it; Tunis stands on its ruins.

Q. Where is Armenia?

A. In Asia, near the Euphrates : it is a very fertile country, watered by several fine rivers.

Q. Where is Syria ?

A. In Asia, Damascus is the capital.

Q. Is it not supposed that the apricot is a native of Africa ?

A. Yes: it appears to have come from thence, through Persia and Greece to us, with the name of "Africus," which signifies sunny.

Q. What country first furnished us with the gooseberry ?

A. Flanders: it is a most useful common fruit.

Q. Is not the currant tree said to have been first brought from Zante ?

A. Yes: and planted in England in the reign of Henry VIII.

Q. Whence have we cherries ?

A. This well known fruit formerly grew wild in the woods near Cerasus, in Pontus.

Q. Where is Pontus ?

A. On the southern coast of the Black Sea.

Q. Who first brought them to Rome ?

A. Lucullus, a Roman general.

Q. And when were they planted in England?

A. In Henry the Eighth's time.

Q. Do not the Swiss distil a strong spirit from the wild black cherry?

A. Yes: and sell it to the French and Germans at a considerable profit.

Q. Is not the wood and gum also valuable?

A. Yes: the wood is much used by turners and cabinet makers, and the gum is very nourishing.

Q. What story is related by Hasselquist to prove this?

A. He informs us, that during a siege, more than 100 men were kept alive for two months, by putting a little of this gum into their mouths, and letting it dissolve.

Q. Who was Hasselquist?

A. A Swedish botanist and natural historian, born in East Gothland, in 1722.

Q. What are medlars?

A. A native English fruit, having been remarked, more than a century

ago, to grow wild in the hedges about Minshull, in Cheshire.

Q. What is their appearance?

A. They look half rotten when brought on table ; for they are placed in moist bran for a fortnight, to prepare them for eating.

Q. What is the pomegranate?

A. An apple shaped fruit, with a thick rind, and a rich scarlet flower, most highly valued by the Greeks and Romans.

Q. What are cranberries?

A. A small red fruit about the size of a pea, which grows in the morasses and bogs in the north of England, Lincolnshire, and Cambridgeshire.

Q. Is not the collecting of cranberries a disagreeable employment?

A. Yes : for each berry grows on a separate stalk, and the gathering is damp, dirty work.

Q. What town is famous for them?

A. Longtown, in Cumberland ; their rich flavour is generally esteemed.

Q. Are not many brought to this

country from North America and Russia ?

A. Yes : they are a larger fruit, but not so pleasant.

Q. What use do the inhabitants of Sweden make of this fruit ?

A. They use it to clean their silver plate.

Q. What are guavas ?

A. The guava is a West Indian fruit; equally delicious and wholesome; it is eaten raw, but is prepared as a sweetmeat in many ways, particularly in that form called guava jelly.

Q. Whence have we tamarinds ?

A. From both the Indies ; they make a most delightful preserve.

Q. To what people are we indebted for the use of tamarinds ?

A. To the Arabians ; in hot climates they are used as a cooling and agreeable drink.

Q. What are plumbs ?

A. A well-known fruit in England ; the magnum bonum, or egg plumb,

the green gage, and many others, all originally come from the wild plumb.

Q. What are prunes?

A. French plumbs dried, they are usually very prettily packed in boxes, and exported.

Q. What do you mean by exported?

A. Sent abroad to other nations.

Q. Whence do they principally come from?

A. Brignolles, a town of Provence, and near Marseilles, is one of the most famous places in France for dried plumbs; also Bordeaux, a rich town in Guienne.

Q. What are raisins?

A. Very ripe grapes, prepared by drying them in the sun.

Q. Where do they come from?

A. Most of the southern countries of Europe.

Q. What city produces the finest, called jar raisins?

A. Damascus, the capital of Syria.

Q. Where is Syria?

A. A noted country in Asia.

Q. What are currants ?

A. A small dried grape, anciently growing in the isthmus of Corinth, whence they obtained the name of Corinths, since corrupted to currants.

Q. Where do they chiefly come from now ?

A. Most of the islands in the Archipelago, particularly Zante.

Q. Are the natives acquainted with the use we make of them ?

A. No: they imagine we use them in the dying of cloth, and are ignorant of our luxury of Christmas pies and plumb puddings.

Q. What are figs ?

A. The rich soft fruit of the fig-tree.

Q. Does it not appear from history, that the fig-tree was much valued by the ancients ?

A. Yes: it was the most common and favourite fruit of the ancient Greeks, and the peasants of Italy.

Q. How are they prepared ?

A. They are dried in a furnace, or

in the sun, after being dipped in a scalding ley made of the ashes of the fig-tree.

Q. Where do they come from?

A. The best from Turkey, Italy, and Spain; the finest are packed in boxes, called drums.

Q. Was not the wood of the fig-tree much valued by the ancients?

A. Yes: for although of a spongy texture, it is most durable, and on this account was formerly used in eastern countries as coffins for embalmed bodies.

Q. What are almonds?

A. A kernel which is contained in a tender shell, with many small holes on the outside.

Q. What countries furnish us with this pleasant nut?

A. France, Spain, Italy, and the Levant, they are packed in casks and boxes.

Q. What is their use?

A. They are eaten with raisins in desserts, also in confectionary, and by

pressure they yield a great deal of oil used in medicine.

Q. What are cocoa-nuts?

A. A woody fruit, covered with a fibrous husk, growing in most hot climates, with a firm white kernel.

Q. Is it not a most beautiful, as well as useful tree?

A. Yes: it grows forty to sixty feet high, and has no leaves except at the top, which appear like immense feathers, each fourteen feet long.

Q. How does the fruit grow on this curious tree?

A. The nuts hang down from the summit in clusters of a dozen or more together.

Q. Does it not afford food, milk, oil, clothing, and shelter?

A. Yes: the nut is like a filbert, it yields an oil when pressed like almonds, and when fresh, a quantity of milk is found in it.

Q. From what part are cloth, sails, and cordage made?

A. From the fibrous substance which

surrounds the nut, and the trunk is made into boats, so that every part of this tree is of use.

Q. What are capers ?

A. The unopened flower-bud of a little creeping shrub which grows wild in the South of France, and upon the walls of Rome, Sienna, and Florence.

Q. Where is this shrub largely cultivated ?

A. Between Marseilles and Toulon, also at Toulon and Majorca.

Q. What do they do with them ?

A. Pickle them ; they are much used in sauce for boiled mutton, and sometimes in medicine.

Q. Whence have we olives ?

A. From Italy, Spain, and the southern parts of France.

Q. Are they eaten fresh ?

A. No, they are pickled in salt and water. .

Q. Are they considered healthy ?

A. Not for persons of delicate habits, on account of the great quantity of oil contained in them.

Q. What is this oil called ?

A. Sweet oil, or oil of olives.

Q. What is it used in ?

A. Sallads, and many other things.

Q. What people used the ceremony of washing the feet and anointing the head with oil to a guest ?

A. The Jews : they also considered it a remedy against the bite of all venomous reptiles ?

Q. Who is said to have been cast into a cauldron of boiling oil at Rome ?

A. St. John the Evangelist, by the command of the Emperor Domitian ; but instead of destroying him, he was not even hurt.

Q. Where was he afterwards banished ?

A. To the island of Patmos, where he wrote the Revelations.

Q. Where is Patmos ?

A. An island in the Archipelago : St. John died at Ephesus, in Asia Minor.

Q. What is the olive tree considered as a symbol of ?

A. Peace.

Q. Is it not also used in medicine ?

A. Yes : it is said to be a remedy against the bite of the viper.

Q. Are there not two or three different kinds of oil which are of great use ?

A. Yes.

Q. What is common or train oil ?

A. The fat of whales.

Q. What is this fat called ?

A. Blubber ; it is found beneath the skin to the depth of ten or twelve inches.

Q. What is it useful for ?

A. It is burnt in the lamps in the street, and is very useful in cleaning wool, and in other manufactures.

Q. Is there still another sort of oil ?

A. Yes : there is an oil obtained from rape-seed by pressure.

Q. What is rape-seed ?

A. A grass-like plant, which grows on a rich soil, and is so fine, that they thrash it on a large cloth in the field.

Q. After the oil has been pressed

out of it, what is the remainder called?

A. Oil-cake; it is much used for the fattening of oxen.

Q. Where does it grow?

A. In several parts of England.

Q. What is neat's foot oil?

A. It is procured from the feet of oxen, and is of great use in preparing and softening leather.

Q. What is linseed oil?

A. It is pressed from the seed and pods of flax, and is useful in medicine and the arts.

Q. What is isinglass?

A. It is made of the sounds, and air bladders of fish.

Q. What fish particularly furnishes isinglass?

A. The sturgeon, found in the river Wolga; the Russians long kept the secret of preparing it.

Q. What is it useful for?

A. It is used by brewers and others, for fining and clearing all fermented liquors; also in medicine, and in cookery for making jellies.

Q. Are not vast quantities of sturgeon caught annually in the Caspian sea?

A. Yes, from 3 to 400,000; and from a species called the starred sturgeon, the best caviar and the strongest isinglass are obtained.

Q. What is caviar?

A. A food made from the roes of the sturgeon, much eaten by the Russians.

Q. What is done with all sturgeons caught near London?

A. They are taken to the Lord Mayor, and by him presented to the King.

Q. Do not the people of Astrakan dry these sturgeons in the sun, before the doors of their houses?

A. Yes, and the smell of them attracts such prodigious swarms of flies into the city, that the very air seems alive with them.

Q. Where is the Caspian sea?

A. It is a great lake in Asia; and, besides sturgeon, it has fine salmon and herrings.

Q. Where is Astrakan?

A. A city on the Caspian sea ; rain seldom falls, but it is crossed by the Wolga, which overflows, and when the water retires, the grass grows in less than a month.

Q. What is spermaceti?

A. It is a white, fatty substance, found in an immense cavity of the skull of the whale, distinct from the brain?

Q. Is it not a fluid when the animal is alive?

A. Yes, but when dead, it is found in solid lumps of a whitish colour.

Q. Is spermaceti found in all whales?

A. No, it is the oil of a particular kind of whale, known from the common whale by having a bunch on its back.

Q. What are the uses of spermaceti?

A. It is of great use in medicine, for coughs and inward bruises, and candles are also made of it.

Q. What are yams ?

A. A certain root used by the Americans for feeding their negroes.

Q. Is it not a singular root in shape ?

A. Yes, it is very large, and looks like a man's leg.

Q. Are not yams sometimes boiled for food, or ground into flour ?

A. Yes.

Q. What are dates ?

A. A fruit shaped like a large acorn, much eaten by the Africans and Egyptians.

Q. Where is the date tree principally cultivated ?

A. On the African coast of the Mediterranean ?

Q. Are not the leaves of this tree very large ?

A. Yes, they are eight or nine feet long, and are sent to Italy, under the name of palms, to be used in the grand religious procession on Palm Sunday.

Q. Which is Palm Sunday ?

A. The Sunday before Easter, when the multitude cut down palm-trees and strewed them in the path of our Lord.

Q. What are cucumbers ?

A. A cooling fruit, always eaten before they are ripe, with vinegar, oil, pepper, and salt. They are sometimes stewed.

Q. From what country were they brought ?

A. From some part of the Levant ; they are raised in hot-beds under glass in this country.

Q. What are gherkins ?

A. Very young cucumbers, pickled with vinegar and spices.

Q. What is the common melon ?

A. A species of cucumber. In hot climates this fruit attains great perfection ; in our's it is raised under glass.

Q. What is the water melon ?

A. Another species, highly valued in hot climates for its delicious flavour and coolness. It melts in the mouth, and, like the fluid in a cocoa-nut, may be poured through a hole and drank.

Q. What countries particularly value them?

A. Egypt, China, and the East Indies; their pulp in general is of a reddish colour.

Q. What are mangos?

A. Such as we see in this country, is the unripe fruit of a large East Indian tree, pickled in vinegar?

Q. Is it a fruit much esteemed in India?

A. Yes; when ripe it is about the size of a goose's egg; its smell is so refreshing that it is thought it will restore persons in a declining state of health.

Q. What are capsicums?

A. South American and Indian plants, known by their pods of shining red or yellow colour, which contain many small seeds.

Q. What are they useful for?

A. In hot climates they are eaten in large quantities, in both animal and vegetable food.

Q. What is Cayenne pepper?

A. It is made from the fruit of different species of capsicums.

Q. What process does it undergo?

A. When ripe it is dried in the sun, pounded, and mixed with a certain quantity of salt, then kept for use, closely stopp'd in bottles.

Q. Is it considered wholesome and useful?

A. Both: for it is much used in eating, and is strongly recommended by doctors in gouty and paralytic cases, to promote the action of the organs when languid.

Q. What is garlic?

A. A bulbous root, of an offensive smell, and strong flavour, much eaten by the lower classes of French, Spaniards, and Portuguese.

Q. What other people eat it to excess?

A. The Jews: it is also much used in medicine, in dropsy, asthmas, agues, and all nervous disorders.

Q. Has it not been found of use in curing deafness?

A. Yes, by wrapping a clove of garlic in mustard, and putting it into the ear.

Q. Is not the juice of garlic said to be a strong cement?

A. Yes; the strongest that can be used for broken glass or china.

Q. Where does this plant grow wild?

A. In the island of Sicily.

Q. What are leeks?

A. A bulbous root of the garlic tribe, much used in some countries, in soups, broths, &c.

Q. What country are they a native of?

A. Switzerland.

Q. What nation wear the leek as a badge of honour?

A. The Welsh, on the day of their patron saint, St. David.

Q. What gave rise to this curious custom?

A. It happened that during the Welsh wars, a party of Welshmen wanted a mark of distinction, and

passing through a field of leeks, they seized and stuck the plants in their caps; and under this signal they were victorious.

Q. What is the Canadian or tree onion?

A. It is curious from producing its onion on the top of the stalk.

Q. What are shalots?

A. Another kind of garlic, much used by the French in cookery.

Q. What is soy?

A. A dark coloured sauce, made from the seeds of a Chinese plant.

Q. Is there not a joke amongst seamen, that soy is made from beetles and cock-roaches?

A. Yes: it originates from a fancied resemblance in colour and shape of the seeds to the beetle.

Q. Where is this esteemed sauce prepared?

A. Chiefly in China and Japan; that brought from the latter place is most preferred.

Q. What is the anchovy?

A. A small fish of the herring tribe, made into a well known sauce, or salted and pickled.

Q. Where are they caught?

A. In the Mediterranean; but the principal fishery is on the shores of Gorgona, a small island near Leghorn in Italy.

Q. What is saloop?

A. A nourishing drink, sold very early in the morning, in the streets of London, to the poor.

Q. What is it made of?

A. An infusion of sassafras mixed with milk, which is considered very nourishing.

Q. Who value this drink highly?

A. The Turks: what we use in this country is principally prepared and brought from the Levant.

Q. What is sassafras?

A. The wood, root, and bark of a tree growing in North America, used in medicine.

Q. Has it not a very powerful scent, disagreeable to insects?

A. Yes ; therefore in America they make bedposts of the wood, and put it into wardrobes to prevent moths.

Q. What is common salt ?

A. A preparation extracted from sea-water.

Q. How is this done ?

A. By putting sea-water into large shallow trenches, the sun dries up the water, and the salt is found at the bottom.

Q. Is there any other kind of salt ?

A. Yes : there is a finer sort called rock salt, that is dug out of mines.

Q. Where are these mines ?

A. In several places, but the most noted one is at Cracow, in Poland.

Q. Is there not something very remarkable about this mine ?

A. Yes : it is inhabited, and there are houses, chapels, and streets of rock salt formed in it.

Q. Is it not extremely beautiful ?

A. Yes : and when illuminated it sparkles like diamonds.

Q. Is there not also a celebrated salt mine at Wieliczka, in Galicia?

A. Yes: belonging to the Emperor of Austria, it affords support to many thousands, and must be well worth viewing.

Q. Are there not also mountains of salt?

A. Yes: there is one 500 feet high, near Cardona, fifty miles from Barcelona, in Spain, also one in Lahore, a province of Hindostan, and in Peru.

Q. What is bay-salt?

A. That which is produced by the evaporation of sea-water by the heat of the sun only.

Q. What is saltpetre?

A. It is another sort of salt, found pure on the surface of the earth in some parts of India, Africa, and Spain, where it is swept off at certain seasons, twice or three times a week.

Q. But is it not artificially made?

A. Yes: from the refuse of animal and vegetable substances, which undergo a state of putrefaction.

Q. From what country does it chiefly come?

A. The East Indies; the India Company are under engagements to import 500 tons every year.

Q. What other name is saltpetre also known by?

A. That of nitre.

Q. What renders it of so much importance?

A. Its being a principal ingredient in the composition of that destructive discovery called gunpowder.

Q. What is gunpowder?

A. A mixture of nitre, sulphur, and charcoal; but by far the largest part is nitre.

Q. How was gunpowder invented?

A. A monk of Cologne, called Swartz, when making chemical experiments, discovered that the above mixture finely powdered, would produce an explosive quality.

Q. But who discovered its great and destructive powers?

A. Roger Bacon, a learned English-

man, in the reign of Edward I. ; he spoke of it as a potent engine in the destruction of armies.

Q. When was it first used in battle ?

A. At Cressy, and afterwards at the siege of Calais.

Q. Is it not said that the Chinese were acquainted with gunpowder long before this period ?

A. Yes.

Q. What is common sulphur, or brimstone ?

A. It is a yellow, dry substance, which in burning yields a suffocating fume.

Q. Whence have we it ?

A. It is dug out of the earth in many places, particularly in Italy, Switzerland, and South America.

Q. What is aqua-fortis ?

A. A mixture of nitre and clay, distilled in a glass apparatus.

Q. What is the great use of aqua-fortis ?

A. All metals except gold and silver can be dissolved in it.

Q. What great use do dyers make of it?

A. They use it for dissolving tin and forming with madder that beautiful scarlet colour so much admired.

Q. Was not its use in this respect discovered by chance?

A. Yes: a girl at an inn wanted to dye some ribbons, and asked her lover, who worked at a manufactory, for a little scarlet dye.

Q. What did she do with it?

A. She put it in one of the porter pots, and having nothing better, she boiled her ribbons in it, and they came out a most brilliant colour.

Q. Was her lover surprised when he saw it?

A. Exceedingly so, and being a clever fellow, he imagined the tin pot had caused it, and by this means discovered an important secret.

Q. What is madder?

A. A trailing plant much cultivated in England and Holland, on account

of its roots, which are used by dyers and calico-printers.

Q. What colour is procured from it ?

A. A fine red colour, and it also forms a first tint for several other shades.

Q. What foreign countries produce it ?

A. It grows wild in South America, and in the neighbourhood of Smyrna, and the island of Cyprus produces a kind which affords a very beautiful colour.

Q. What animals are very fond of madder ?

A. Cows, it makes their butter a fine yellow colour.

Q. What are wafers ?

A. They are made of flour, isinglass, and a small quantity of yeast.

Q. What more is done ?

A. This mixture is coloured, spread out in very thin cakes on tin plates, dried on a stove, and cut out into wafers.

Q. What is ink ?

A. A mixture of galls, copperas, gum-arabic, and water.

Q. What are galls?

A. A swelling on the leaves of the oak, occasioned by the bite of a small insect, who lodge their eggs in it.

Q. Are galls useful?

A. Yes: quantities of them are used in dyeing, and for other purposes.

Q. What is copperas?

A. A mineral salt formed from copper, produced from the moisture of the atmosphere.

Q. What is its colour?

A. A bright green; it is in much request by dyers, tanners, and the manufacturers of ink.

Q. What is gum-arabic?

A. A well known drug, the sap of a tree which grows in Egypt, Turkey, and in the neighbourhood of the Persian gulph: it issues from the bark like the gum of the cherry and plumb tree.

Q. What is pounce, or gum sandarac?

A. The gum of the common juni-

per; when powdered and passed through a fine sieve, it is called pounce, and used upon writing paper where it has been scratched.

Q. What else is it of great value in?

A. Cabinet-makers and painters use a great quantity of it in the preparation of varnish.

Q. What is paper made of?

A. Linen and cotton rags.

Q. What do the Chinese make it of?

A. Silk.

Q. Are not some coloured rags bleached white for the purpose of making common writing paper.

A. Yes: but the superfine writing paper is made of white rags.

Q. How is paper made?

A. The rags are first sorted; the white ones make writing paper, and the coloured ones are used for the commoner sorts.

Q. What is then done?

A. They are carried to a mill, and put into an engine placed in clean water.

Q. What sort of an engine is it?

A. It is an iron instrument with long sharp teeth, or knives, which by moving round very quickly, soon tears the rags asunder, and reduces them to a pulp.

Q. What is next done?

A. This pulp is put into a copper of warm water, and then resembles thin starch, and moulds of the size of a sheet of paper are dipped into it.

Q. What are these moulds like?

A. A frame, with a most delicately fine wire-net.

Q. What is next done?

A. The paper is made by gently shaking this mould when dipped in the pulp, till it is as thick as is wanted.

Q. How do they then proceed?

A. Each sheet is then placed between two pieces of woollen cloth, and taken directly to be pressed, after which it is taken out and hung up separately to dry, it is then sized.

Q. What is size?

A. A kind of glue.

Q. How made ?

A. From the parings which are cut from the edges of sheep skins, and also from slips of parchment ; the size made from the latter is the best.

Q. Was paper known to the ancients ?

A. Not such as we use ; the Egyptians prepared a rush, called papyrus, whence the word paper is derived.

Q. Where did this rush grow ?

A. Principally about the banks of the Nile, in Egypt.

Q. Who is said to have been exposed in a basket made of these rushes ?

A. Moses ; and the inhabitants even now weave it into cloth, mattresses, ropes, &c.

Q. What are pens ?

A. The pen is an instrument to write with, made of quills, taken from the wings of ravens, turkeys, peacocks, and geese.

Q. What poor bird is stripped whilst alive, every year, for the sake of its

quills, or large feathers in the wings?

A. The goose; great numbers of them are kept in the fens of Lincolnshire for this purpose.

Q. Are they not also tormented for the down, or small feathers, which grow under the wing?

A. Yes: five times a year they undergo this painful operation, for the purpose of stuffing our beds, bolsters, and pillows.

Q. Who write with reeds to this day?

A. The Turks, Moors, and Eastern people.

Q. What did the ancients use?

A. An iron style; it was sharp at one end, like a needle, to write with, and at the other end blunt and broad, to scratch out with.

Q. Who has humorously remarked that the goose, the bee, and the calf, rule the world?

A. Mr. Howel; the first furnishing quills, the second, wax, and the last parchment.

Q. What is pasteboard ?

A. It is formed of several sheets of paper pasted together and pressed.

Q. What is parchment ?

A. The skins of sheep and goats, prepared in a peculiar manner.

Q. Who is said to have been the inventor ?

A. Eumenes, King of Pergamos ; but he was the improver rather than the inventor of parchment.

Q. Why ?

A. Because the Persians, and others, are said to have written all their records on skins long before Eumenes' time.

Q. What is vellum ?

A. The skin of young calves ; it is finer, whiter, and smoother than the common parchment.

Q. To what purpose are vellum and parchment principally applied ?

A. For writing deeds upon, as being more desirable than paper ; the lawyers use great quantities of it.

Q. Where is it principally prepared?

A. In France.

Q. What is sealing wax?

A. It is made of shell-lac and rosin, melted and prepared, and coloured with vermilion, or according to fancy.

Q. What is shell-lac?

A. A substance left by an insect on many trees in the East Indies.

Q. What is rosin?

A. The juice or sap of trees.

Q. What trees furnish this sap?

A. The fir and the pine; it is when this sap is dried up that it is called rosin.

Q. What is Indian rubber?

A. The dried juice of a large tree, called the syringe tree, growing in Guiana, Quito, Cayenne, and other parts of South America.

Q. How is it procured?

A. By cutting the tree in wet weather, which causes the juice to ooze out, of a milk white colour.

Q. How is it converted into the state in which we use it?

A. These moulds are hung over smoke till quite dry, when they are broken to pieces, and the rubber is fit to use.

Q. What use do the Indians make of it?

A. They make flambeaux; also boots, bottles, and a kind of cloth, all of which are impenetrable to the water.

Q. What use do we make of it?

A. Principally in drawing, to efface the marks of black lead.

Q. Are not pencils made from black lead?

A. Yes; the black lead used for them, is chiefly found at Borrowdale, in Cumberland.

Q. How is the pencil made?

A. By cutting the lead into very thin slips, and putting it between two small pieces of wood, which are glued together.

Q. What is glue?

A. It is made from the fat of animals boiled down to a strong jelly.

Q. How are painting brushes made?

A. By fitting squills with camel's hair.

Q. What is remarkable of the hair of the camel?

A. That it falls off, and is renewed every spring; it is so soft and fine, that it is manufactured into the beautiful shawls so much valued from India.

Q. What do they use for other brushes?

A. Hog's bristles, and they are also used by shoe-makers in the place of needles.

Q. What is sponge?

A. It is said to be formed by an animal which remains fixed to the rocks, covered with sea water.

Q. Is not the growth of sponge very rapid?

A. Yes: it is often found in perfection on rocks, from which, only two years before, it had been entirely cleared.

Q. From whence is it generally brought?

A. From Constantinople, the state of Barbary, and the islands in the Archipelago.

Q. Where is Constantinople?

A. The capital of Turkey in Europe.

Q. Where are the States of Barbary?

A. In the north of Africa.

Q. What is sponge valued for?

A. Its use in surgery and painting wash out, or soften the colours.

Q. What is cork?

A. The bark of a beautiful tree which is a kind of a large green oak.

Q. Where does it grow?

A. In Italy, Spain, Portugal, most of the southern countries of Europe.

Q. Is the bark stripped off early?

A. After the tree is about fifteen years old.

Q. Is it prepared in any way?

A. It is soaked in water, and then over a strong fire.

Q. What use is made of cork?

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A. After the tree is about fifteen years old.

Q. Is it prepared in any way ?

A. It is soaked in water, and dried over a strong fire.

Q. What use is made of cork ?

A. Principally to stop bottles, to make floats for nets, buoys for rivers to direct vessels, for soles of shoes, and jackets to swim in.

Q. Did not the Egyptians make their coffins of cork?

A. Yes; and lined them with a resinous composition, to preserve their embalmed bodies.

Q. What is Spanish black, so much used by printers?

A. Burnt cork: the parings are generally sold for this purpose.

Q. How are candles made?

A. From tallow.

Q. What is tallow?

A. The fat of sheep and oxen.

Q. What is done with the fat to prepare it?

A. It is melted in water, boiled several times, and cleared by the addition of alum.

Q. How are mould candles made?

A. By pouring boiling tallow into leaden moulds, in the middle of which a cotton has been fixed.

Q. How do they make kitchen candles?

A. By tying the wicks on a long stick, and then dipping them two or three times in hot melted tallow, until the candles become of a proper size.

Q. In which of our king's reigns were tallow candles considered a great luxury?

A. In Henry the third's time; splinters of wood being then burnt in common.

Q. How are rush lights made?

A. In the same manner, only the wicks are made of dried peeled rushes.

Q. Is there not a tree called the tallow tree?

A. Yes; it is a native of China, the fruit of this tree is enclosed in a husk, like that of the chesnut, and consists of three white kernels.

Q. How do the Chinese prepare candles from these?

A. They melt the kernels, and add a little oil, and colour them with ver-

million ; they are better than our tallow candles, but inferior to wax.

Q. How do they form the wick ?

A. Of little slips of dry wood, with the pith of a rush entwined round them.

Q. How are wax candles made ?

A. Of melted wax instead of tallow, and they have a flaxen wick which never wants snuffing.

Q. What is wax ?

A. It is a substance of which the bee curiously forms its comb, of a yellow colour like honey.

Q. What is white wax ?

A. It is prepared by melting bee's wax in water, and bleaching it in the sun and air.

Q. What is flax ?

A. The produce of a beautiful grass-like annual plant, with slender stalks, small leaves, and blue blossoms.

Q. What is its use ?

A. To weave into linen for shirts, sheets, cambric, and many other things.

Q. How is it procured ?

A. It is sown in March and April ; when ripe it is pulled up by the

roots, steeped in water, and by the fermentation which takes place, the bark or flaxy substance becomes separated.

Q. Is it necessary to do any thing else?

A. Yes: these threads must be properly dressed and spun, according to purposes for which they are to be used, then woven into linen, after which it must be bleached.

Q. What is bleaching?

A. The method of making linen white, by exposing it to the sun and air, as when it comes from the weaver's hands, it is of the colour of flax, which is of a light brown.

Q. How is this operation performed?

A. It is first steeped in bran and water, then well washed and spread on the grass to dry.

Q. What is next done?

A. Buckets full of water, mixed with a strong ley made of wood ashes, are constantly thrown over it, and the washing and spreading to dry must be often repeated.

Q. Is it not often steeped in butter-milk?

A. Yes: after which it must be well rinsed, and frequently washed in soap and water, when it becomes delicately white.

Q. What place is noted for bleaching fine linen?

A. Coleraine, a large town in Ireland, in the county of Londonderry.

Q. To what country are we indebted for this valuable plant?

A. It is supposed it came from those parts of Egypt annually inundated by the Nile.

Q. Which of the British isles is famous for its linen?

A. Ireland: a colony of Scots, in the reign of James I., fled from persecution in their own country, and settled at Coleraine, in Londonderry.

Q. Is it not the principal manufacture of that country?

A. Yes: and flax is cultivated there with great care and success.

Q. Is not Irish cloth used for body linen by all who can afford it ?

A. Yes : it is made of flax, and called Irish linen ; and the towns of Belfast, Carrickfergus, and Londonderry, in the north of Ireland, manufacture this article in great perfection.

Q. What is gauze ?

A. A thin transparent stuff made of thread or silk ; it is striped and figured, and forms a delicate article for trimming.

Q. What is cambric ?

A. The finest of all cloth made of flax ; it takes its name from Cambray, where it was first manufactured.

Q. Where is Cambray ?

A. A strong fortified town in the Netherlands, seated on the river Scheld ; in its old cathedral, the celebrated Fenelon, who wrote *Telema- chus*, is buried.

Q. What is Damask ?

A. A beautiful silk or linen, with large flowers wrought or worked into patterns upon it, invented at Damascus,

in Syria, from which place it derives its name.

Q. What places now excel in this manufacture ?

A. Tournay, in Flanders, and Châlons, in Champagne ; and it has of late years been brought to wonderful perfection in this country,

Q. Is Damascus famous for any thing else ?

A. Yes : for a very fine kind of steel, used chiefly for sword-blades, which will bend nearly double without snapping, this is called being of *fine temper* ; also, for its roses, and damson plums.

Q. What is damaskeening ?

A. Cutting the steel into different figures, and filling them up with gold and silver wire, done for adorning sword-blades, locks of pistols, &c.

Q. What is hemp ?

A. The fibrous part of the stalks of a most useful plant, something like the common nettle.

Q. What is its use ?

A. The finer parts, after being

prepared like flax, are spun into thread, and woven into canvass, and strong cloth.

Q. What do they do with the rest ?

A. It is made into twine, ropes, cables, and cordage of every description.

Q. Is it used for any thing else ?

A. Yes : and it is called tow, or gun-tow ; the latter is used for lighting matches for cannon, and stopping blood from wounds in battle.

Q. What country carries on a great commerce in it ?

A. Russia ; but it is cultivated in Suffolk and Norfolk.

Q. What is cotton ?

A. A downy substance contained in a pod, which when ripe, bursts, and the snow-white or yellowish contents collected.

Q. Where does this plant grow ?

A. The very finest comes from the East and West Indies ; it is raised annually from seed, and grows to a considerable height.

Q. But is it not much cultivated in Europe ?

A. Yes: in Candia, Lemnos, Cyprus, Malta, Sicily, and Naples ; also at Jerusalem and Damascus.

Q. How is it sown ?

A. On ploughed lands, in spring, and is cut down like corn in harvest time.

Q. Are there not cotton trees ?

A. Yes ; two sorts grow in Egypt, and arrive at a great size.

Q. What articles are made of this useful plant ?

A. Calicoes and muslins, dimities, and many other stuffs.

Q. What is muslin ?

A. A fine thin transparent texture, made wholly of cotton.

Q. Where did this beautiful manufacture originally come from ?

A. The East Indies, chiefly from Bengal ; and Dacca, in that province, has long been famous for a superior sort.

Q. Are the East India muslins as much valued as they used to be ?

A. No: for they are now made equally fine at Glasgow and Paisley.

Q. Where are these two towns?

A. In Renfrew, in Scotland.

Q. What is crape?

A. A thin stuff, loosely woven, invented at Bologna, in Italy.

Q. What is camelot?

A. A stuff made chiefly of goat's hair.

Q. What is silk?

A. The production of a caterpillar, produced from the eggs of a moth, called the silk worm.

Q. How are these little creatures managed?

A. Each moth lays about two hundred eggs; they are placed in houses in the midst of mulberry trees, and are watched night and day.

Q. Is not the silk-worm a most curious insect?

A. Yes: from this little egg comes a small worm, which is fed with mulberry leaves, chopped very fine, for about thirty days, when they are full

grown, and become a large white worm.

Q. What does it then do?

A. It ceases to eat, when they are furnished with little bushes of heath or broom, on which they begin to form their silken ball.

Q. What next takes place?

A. On the third day it is hidden from sight, and on the tenth the work is finished.

Q. What are these balls now called?

A. Cocoons, and the worm in this state is called a chrysalis.

Q. What do they do with the ball now?

A. They wind off the silk directly, or the worm would spoil it in trying to quit it.

Q. Pray is the worm killed?

A. No: it is changed into a dark-brown grub, which is again changed into a white moth.

Q. Does this curious insect undergo any other change?

A. No other: it only lays eggs for

worms the next year, and then in a very short time dies.

Q. What places are noted for these insects?

A. China, the East Indies, the Levant, several parts of Italy, and the south of Spain.

Q. Is not the Morea celebrated for the culture of silk-worms?

A. Yes : the Morea was so named from "Morus," a mulberry tree, great numbers of them growing there for the support of silk-worms.

Q. Pray, to whom are the moderns indebted for this curious invention?

A. To the inhabitants of the isle of Cos, in the Archipelago.

Q. From whence did they procure it?

A. From Serica, where the worm was a native ; but it was long before the Romans would believe silk to be the work of a worm.

Q. Where is Serica?

A. It was a country of Asia, we are told, between the Ganges and the

Eastern ocean, generally thought to mean China.

Q. Was not silk very scarce for many ages?

A. Yes : it was sold for its weight in gold.

Q. What Roman emperor refused his empress a robe of purple silk, on account of its enormous expense?

A. The Emperor Aurelian.

Q. What English king wore the first pair of knit silk stockings?

A. Henry II. : the invention of them came from Spain ; but they were not heard of again till the reign of Henry VIII. and Edward VI.

Q. Who presented Edward VI. with a pair?

A. Sir Thomas Gresham, and they were much thought of.

Q. What did Queen Elizabeth think of silk stockings?

A. In the third year of her reign, she was furnished by her silk woman with a pair, which she admired "as marvellous delicate wear," and

she would never after use cloth ones.

Q. Was not this Queen very fond of dress?

A. Yes : it is said after her death, that three thousand different habits were found in her wardrobe.

Q. What story is told of James I., whilst King of Scotland?

A. He borrowed of the Earl of Mar a pair of silk stockings, to receive the English ambassador in, observing, "For ye would not, sure that your king should appear as a scrub before strangers."

Q. How did he like them?

A. So well, that it is said he danced them into holes.

Q. What is velvet?

A. A rich kind of stuff all silk, covered on the outside with a close, short, fine shag, the inside being a very strong thick tissue.

Q. How is this shag or velveting made?

A. It is formed of parts of the

threads of the warp, which the workman puts over a long narrow channelled ruler or needle, which he afterwards cuts.

Q. How does he contrive to do this?

A. By drawing a sharp steel tool along the channel of the needle to the ends of the warp.

Q. Where are the principal and best manufactories of velvet?

A. In France and Italy, particularly in Venice, Milan, Florence, Genoa, and Lucca.

Q. What do you mean by weaving, or a web?

A. It is a texture formed of threads, interwoven with each other, some of them are extended in length, and called the warp; and the others which are drawn across, are called the woof, or weft.

Q. How do they form patterns in weaving?

A. By throwing the woof, not over every other thread of the warp, but allowing two, three, or many more threads

of the warp, to remain unbound, by shooting the woof under them, and thus forming a pattern.

Q. What place is noted for the weaving of ribbons?

A. Coventry, in Warwickshire.

Q. What contributed to the full establishment of silk weaving in this country?

A. The cruel treatment of the Protestant Christians in France, in 1685, on the revocation of the edict of Nantes.

Q. What was the edict of Nantes?

A. A law made by the good King Henry IV.^e of France, granting the Huguenots, or Protestants, the free use of their religion, and protecting their persons and property.

Q. What king was so foolish as to break this treaty?

A. Louis XIV., he treated the Protestants so ill, that they determined on leaving his kingdom.

Q. How many took refuge in England?

A. Upwards of 50,000, the chief part of whom had been silk weavers.

Q. In which of our king's reigns did this occur?

A. In James the Second's, though being a rigid Catholic, it cannot be said that he encouraged them.

Q. What is lace?

A. A work composed of many fine threads, interwoven by means of a number of bobbins, made of bone or ivory, each of which contains a small quantity of fine thread.

Q. How is the pattern of the lace formed?

A. The pattern is drawn upon a piece of stiff parchment pricked full of holes, and pins being stuck into these holes, or openings, the threads are twisted round them, and the pattern formed.

Q. What place in England is particularly famous for this manufacture?

A. The whole county of Buckingham; especially about Newport Pagnel.

Q. What foreign places have been long famous for rich and costly lace?

A. Brussels, Antwerp, Valenciennes, and Mecklin, all places of note in Flanders.

Q. What is point lace ?

A. It is seldom seen now, it is all worked stitch by stitch with the needle.

Q. What is tapestry ?

A. A most curious kind of hangings, used many years ago to adorn and line the walls of a chamber.

Q. What was it composed of ?

A. Wool and silk ; frequently raised and enriched with gold and silver, representing figures of men, animals, landscapes, &c.

Q. Who are supposed to have been the first manufacturers of this beautiful and costly art ?

A. The English and the Flemish, who are thought to have learnt the art from one of their croisades or expeditions against the Saracens.

Q. Did they not imitate by this work the paintings of the best masters ?

A. Yes : and tapestry became one

of the finest ornaments of palaces and churches.

Q. Is this manufactory still encouraged?

A. No: The Gobelines near Paris, is the only remaining one in Europe, where it is carried to such perfection, that the colouring and beauty of the pieces are equal to the fine paintings from which they are copied.

Q. What is wool?

A. The curled hair or covering of sheep.

Q. How is it prepared?

A. It is first scoured and washed, then dried in the shade, well beaten, and every little bit of dirt picked out.

Q. What is next done?

A. It is oiled, combed, and spun on a wheel; then sized or stiffened a little, when it is fit for weaving into cloth.

Q. Is the cloth now fit for use?

A. No: after it is woven, it is washed with soap and water several times, and dried between each washing.

Q. Is it not fit now to make into cloth for coats?

A. No: it must still be dyed, brushed, and pressed.

Q. Whence have we the best wool?

A. From Spain; but England has long been famous for wool.

Q. What English sovereigns gave great encouragement to the manufacturing of it?

A. Edward III., and Queen Elizabeth. They received the poor people from the Netherlands, and allowed them to establish large manufactories at Norwich, &c.

Q. What is Merino wool?

A. The wool of a famous Spanish breed of sheep, of which the very finest cloths are made.

Q. What is leather?

A. It is made of the skin of different animals.

Q. How?

A. First, the hair is taken off, by steeping it in lime-water, and then scraping it clean with a knife.

Q. What else must be done?

A. It is stretched in a pit, then covered with tan or oak-bark, and the pit filled with water.

Q. Is it now finished?

A. No: it is greased, waxed, blacked and dyed.

Q. What is morocco leather?

A. The skins of goats, dressed, tanned, and dyed in a peculiar manner, invented in Morocco, whence it has its name.

Q. Is not this leather beautifully made in London?

A. Yes.

Q. Why are goats' skins used?

A. Because they take the dye better, and produce richer and more brilliant colours.

Q. Where is Morocco?

A. A large country in Barbary.

Q. Does not the country called Barbary include several kingdoms?

A. Yes: the northern coast of Africa, extending along the sea-shore of the Mediterranean, is so

called: it is near 2000 miles in length.

Q. By what names are the several kingdoms known?

A. Barca, Tripoli, Tunis, Algiers, Fez, and Morocco.

Q. How did the ancients call this country of Barbary?

A. By the name of Mauritania, Numidia, and Libya.

Q. What is chamois leather?

A. A warm pliable leather dressed in oil, or tanned, and much valued for its softness, and being capable of bearing soap.

Q. What sort of animal is the chamois?

A. A kind of antelope, about the size of a goat; these animals inhabit mountainous places, particularly the Alps and Pyrenees.

Q. Is it not a dangerous pursuit to hunt them?

A. Yes: for they go in large companies, and take fright at the least noise, and can spring at a single

leap up rocks more than twenty-feet high.

Q. What is tanning?

A. The art of converting the raw skins of animals into leather.

Q. What is buck-skin, or doe-skin?

A. The hide of the buck, or male deer, manufactured into breeches and gloves, on account of its softness.

Q. What is the doe?

A. The female deer: its young one is called a fawn.

Q. What is a hat?

A. A covering for the head, made of wool and hair mixed curiously together, by means of beating, pressing, boiling, and soaking.

Q. Of the hair of what animals are men's hats made?

A. The finest and most valued are made of the pure hair of an animal, called the castor, or beaver.

Q. What sort of an animal is this?

A. An amphibious one, remarkable for its art, address, and contrivance in building its habitation.

Q. What country is it a native of?

A. Canada, and other provinces of North America.

Q. What do you mean by amphibious?

A. Being able to live both upon land, and in the water, like frogs, tortoises, otters, &c.

Q. What other animals afford hair fit for making hats?

A. The rabbit, hare, and goat, their fur or skin, on this account, is very valuable.

Q. Is not the hair of these animals mixed with much wool?

A. Yes: they are entangled together, pressed, and beaten into a sort of cloth, of which the hat is made.

Q. What is this cloth called?

A. Felt: a little of the real beaver hair is added to the outside, to make it very soft and glossy.

Q. How are the hats made of such a beautiful black?

A. By dyeing, which is done by boiling them in logwood, and afterwards

dipping them into a mixture of copperas and vitriol.

Q. What is logwood ?

A. The bark of a low prickly tree, of a deep red colour, found in great plenty at Campeachy, in the bay of Honduras.

Q. Is it not in high request among dyers ?

A. Yes : especially in dying black, but it is used in making purple, violet, and many other fine colours.

Q. What did men and women wear before hats were invented ?

A. Hoods of various colours, and close knit woollen caps.

Q. Who is said to have introduced the fashion of wearing hats ?

A. Charles VII. of France ; he made his public entry into Rouen, in 1449, wearing a hat lined with red velvet, and ornamented with a plume of feathers.

Q. May the use of hats and caps be dated from this time ?

A. Certainly : for they soon became

general: Charles VII. of France lived in the reign of our Henry VI.

Q. What are gloves?

A. A covering for the hands and arms.

Q. From the skins of what animals are leather gloves made?

A. From the kid, lamb, doe, and elk.

Q. What is a kid?

A. A young goat.

Q. What is a lamb?

A. A young sheep.

Q. What is a doe?

A. The female of a rabbit, as well as of a deer is called a doe; but it is of the skin of the former gloves, are made.

Q. What is an elk?

A. A large kind of deer, the size of a horse; it inhabits Europe, America, and Asia, and feeds on twigs and branches of trees.

Q. Is it a gentle creature?

A. Yes, except when teased by the gad-fly; it travels at the rate of fifty miles a day, in a kind of a stumbling trot.

Q. Where are gloves principally made?

A. At Worcester, Hereford, Hexham, and Woodstock: Limerick, in Ireland, is famous for them.

Q. Where is Hexham?

A. In Northumberland, formerly celebrated for the forest where Queen Margaret met the robber.

Q. Where is Woodstock?

A. In Oxfordshire.

Q. What is meant by the gauntlet?

A. It was a glove of jointed steel plates, which was worn of old by knights in armour.

Q. What use did they principally make of it.

A. To throw it down to any one who had offended them, as a sign that they were to fight till one was slain, or confessed himself vanquished.

Q. What are stockings?

A. Coverings for the feet and legs.

Q. Of what were they first made?

A. Of cloth, or of stuffs sewed together.

Q. Who invented the art of weaving stockings in a frame?

A. William Lee, a native of Woodborough, near Nottingham, in 1589, in the reign of Queen Elizabeth.

Q. What places are noted for our manufacture of cotton stockings?

A. Nottingham, and Aberdeen, in Scotland.

Q. Of what different materials have shoes been made?

A. Of raw skins, rushes, broom, paper, flax, silk, wood, iron, silver, and gold; they are now usually made of leather, stuff, and silk.

Q. Have not their shape, colour, and ornament, been very various?

A. Yes; they have been square, high, low, long, cut, and curved.

Q. What distinguishing ornament did the Patricians, among the Romans, wear in their shoes?

A. An ivory crescent; and Isaiah speaks of the moons which the Jewish women wore in their shoes.

Q. What did the Egyptians use for shoes?

A. The bark of the papyrus, a rush growing on the banks of the river Nile.

Q. What is the custom of the Turks when they enter their mosque?

A. They always put off their shoes and leave them at the door.

Q. How were shoes adorned in England, in the reign of Edward the Fourth?

A. With long peaks turning upwards from the toe, and fastened by silver chains or laces to the knees.

Q. What is the upper leather of men's shoes usually made of now?

A. Of calf-skin; ladies' shoes are made of kid, morocco, jean, satin, and velvet.

Q. What are pins made of?

A. Brass, drawn out into wire, which when the pin is finished, is whitened.

Q. Does not a pin, before it is fit to use, pass through the hands of many workmen?

A. Yes: a great many workmen are employed upon each pin, between the drawing of the brass wire,

and the sticking of the pin in the paper.

Q. How does this happen?

A. When the wire is drawn fine enough, it must be made straight; then cut into proper lengths, afterwards sharpened at the points, then the head is put on: and lastly, it is whitened and polished.

Q. When were pins first used and made?

A. They were invented in France, in 1543, in the reign of Henry VIII.; before this art was discovered, the ladies used small skewers made of wood, bone, and ivory.

Q. Were they not considered a great luxury, and not fit for common use?

A. Yes: the maker was not allowed to sell them in an open shop, except on two days in the year, at the beginning of January.

Q. What old custom did this give rise to?

A. To husbands giving their wives

money at the beginning of the year, to buy a few pins; therefore, money allowed to a wife for her own private spending, is even now called *pin-money*.

Q. Where is there a great manufactory of pins?

A. At Gloucester.

Q. What are needles?

A. A needle is a small instrument made of steel, very pointed at one end, and pierced at the other for the thread.

Q. What steel makes the best needles?

A. The German and Hungarian steel.

Q. When were needles first made in England?

A. In the reign of Queen Mary, by a negro from Spain; but as he would never tell the secret, it was lost at his death.

Q. When was this useful art recovered?

A. In the reign of Queen Elizabeth, when Elias Growse, a German, taught

the art to the English, who have since brought it to great perfection.

Q. What is cat-gut?

A. This is a name given to small strings for violins, and other instruments, formerly made from the skins of the intestines of cats.

Q. But what is now chiefly used?

A. The intestines of sheep or lambs, dried and twisted, either singly, or several together.

Q. What places are famous for making it?

A. Lyons, in France, Italy, and Germany.

Q. What is whalebone?

A. A sort of gristle found inside the whale's belly, in thin, long, flat pieces, three or four yards long.

Q. Are there not 4 or 500 hundred of them in one whale?

A. Yes: they stick to the upper jaw, and form a kind of strainer to keep in the sea-snails, which they live upon.

Q. What is whalebone used for?

A. To stiffen stays, umbrellas, and whips.

Q. How are whips made?

A. Several slips of whalebone are put together, each piece growing smaller towards the point; they are bound together by a sort of net-work woven round them.

Q. What is the lash made of?

A. A piece of whip-cord; and its length and quality depend upon the purpose it is to be used for.

Q. What place is famous for whips?

A. Daventry, in Northamptonshire.

Q. What is a cable?

A. A strong thick rope made of hemp, fastened to a ship's anchor.

Q. What are its uses?

A. To hold ships firm at anchor, and to tow vessels in large rivers. Every great ship has three cables.

Q. At what place in England are they principally manufactured?

A. At Deptford, in Kent.

Q. What is a telescope?

A. It is an optical instrument of

many glasses, which brings objects at a great distance close to our view.

Q. Who has the honour of the invention ?

A. This is not exactly known ; but Galileo was the first who brought it to any degree of perfection.

Q. Who was he ?

A. An Italian, born at Florence, in Italy.

Q. What did he become from great study, and the constant use of his glasses ?

A. Quite blind.

Q. Who has since brought the telescope to the greatest perfection ?

A. Doctor Herschell.

Q. What is the microscope ?

A. An instrument which magnifies the smallest objects, so as to render them clearer to the sight.

Q. What is the barometer ?

A. An instrument for telling the changes in the weather, by means of the variations in the state of the air.

Q. What is the thermometer ?

A. An instrument for measuring the degree of heat or cold, by the rising or falling of the mercury.

Q. What is a clock ?

A. A machine for measuring time, regulated by the uniform motion of a pendulum.

Q. What is a pendulum ?

A. A heavy weight which swings backwards and forwards, so that one tooth of the wheel which makes a tick, escapes every time that the pendulum beats.

Q. What is the difference between a clock and a watch ?

A. A watch cannot have a pendulum, because it would not go unless kept upright ; it is therefore moved by a spring, instead of a weight.

Q. How then is its motion governed ?

A. By a balance, instead of a pendulum ; the balance is a small wheel.

Q. When were clocks first introduced into England ?

A. About 1368, when Edward III. allowed three artists from Delft, in

Holland, to practice their occupation in this country.

Q. When were pocket watches first brought into England ?

A. About the year 1577, in the reign of Elizabeth ; they were invented at Nuremburg, in Franconia, Germany.

Q. What is China-ware, or porcelain made of ?

A. A hard rocky stone, of the nature of flint, ground to a fine powder, mixed with a sort of clay which is quite soft.

Q. Does not the beauty of the china depend upon the mixing of these materials ?

A. Yes : for making the finest sort, they put half and half of each.

Q. How is it made into the many shapes we see it ?

A. It is mixed into a fine paste, well kneaded with the hands, after which it is moulded into shapes, then painted, gilded, and lastly, baked in a furnace.

Q. But is it not partially baked before it is painted, &c. ?

A. Yes : in which state is it called biscuit ?

Q. What do they use in England for the making of china ?

A. A kind of clay and ground flint.

Q. Why is it called china-ware ?

A. Because the first brought into Europe came from China, and the Chinese still excel in this manufacture.

Q. What is the word porcelain supposed to be derived from ?

A. The Portuguese word *porceluna*, which means a *cup*, because the Portuguese were the first who traded to China, and the chief articles they brought over were cups.

Q. Is there not a famous pagoda at Nankin, which has a coat of china all over it ?

A. Yes ; and it gives it a delicate and beautiful appearance.

Q. Has England any occasion now to go abroad for this ware ?

A. No : our own manufactures at Chelsea, Derby, and Worcester, sur-

pass most others in taste, elegance, and beauty.

Q. Is there not a beautiful ware made in France?

A. Yes: it is called Sevre china, and is very expensive, as well as that made at Dresden, in Saxony.

Q. What is glass?

A. A mixture made by melting flint, sand, and alkali, in a very hot furnace.

Q. What is alkali, or kali?

A. A kind of salt, found in the ashes of burnt vegetables.

Q. What is alkali sometimes called?

A. Soda; it is chiefly used in glass and soap manufactories.

Q. How did man become acquainted with the beautiful discovery of glass?

A. Accident made it known to some merchants in Syria, who were shipwrecked on that shore.

Q. How?

A. Finding plenty of the plant kali, they used it for making a fire on the ground, and the ashes mixing with

the sand, produced this beautiful substance.

A. How is glass made into so many curious forms?

A. By blowing; and when first made warm, can be cut by a pair of scissars or shears.

Q. Are not these curious shapes all baked?

A. Yes, or they would fall to pieces.

Q. When were glass windows used in England?

A. Not till the year 1140; about the time of William Rufus, and they were considered as a mark of great magnificence, suitable only to palaces, churches, &c.

Q. What nation first used this beautiful substance for windows?

A. The Italians; in a short time the French learned it. and from them the art travelled into England.

Q. What city was long famed for the fineness of its glasses?

A. Venice.

Q. Where is Venice?

A. In Italy, a rich and celebrated city, built on seventy-two little islands.

Q. Were not horn and oiled paper used as substitutes for glass in windows?

A. Yes: the horn was heated till quite a jelly, when it became thin and transparent, sufficient to keep out cold, and admit light; at present it is useful for common lanterns.

Q. What is horn?

A. A substance growing on the heads of various animals, serving them as weapons, both of offence and defence.

Q. Are they of any great use?

A. Yes: for when strongly heated, or soaked in boiling water, they become very soft, and may be pressed into moulds of various forms, such as handles for knives, forks, &c.

Q. What is kelp?

A. Burnt sea-weed: the making of kelp affords employment to many industrious families in Scotland and the Orkneys.

Q. Where are the Orkney islands ?

A. A cluster of small islands to the north of Scotland.

Q. What is horse-hair ?

A. The hair of the mane and tail of the horse.

Q. What is it useful for ?

A. That of the mane is used for stuffing mattresses, chair-bottoms, saddles, and horse-collars.

Q. And what is the hair in the tail used for ?

A. It is woven into a kind of cloth, for covering chairs and sofas, and for making fishing lines, sieves, and the bows of musical instruments.

Q. What is a carpet ?

A. A covering for the floor, either worked with a needle, or wove in a loom.

Q. What eastern countries have been noted for their carpets ?

A. Persia and Turkey ; some of the former are exquisitely beautiful.

Q. How are the beautiful patterns formed.

A. The workman has a painting traced in its proper colours tied before him, which is divided into little squares, by which he knows how many stitches he is to use of one colour.

Q. What is the difference between a Kidderminster and Brussels carpet?

A. Brussels carpeting is made by passing the threads over a wire, which is afterwards drawn out, leaving a row of loops.

Q. What are the Wilton carpets?

A. They are made like the Brussels carpeting, only the loops are cut before the wires are drawn out.

Q. Are they not very handsome?

A. They look like rich velvet.

Q. What is peculiar of the Axminster carpet?

A. They are woven without a seam to any pattern, and are exceedingly beautiful and expensive.

Q. Were carpets used by the ancients?

A. Yes: they are mentioned in the

Bible, as used by persons who dwelt in tents.

Q. But when were they used in England?

A. It is uncertain; so late as the twelfth century, it was considered an article of great luxury, to have the floors covered even with clean straw.

Q. Is not this mentioned as an instance of the haughty Becket's splendid style of living?

A. Yes: his sumptuous apartments were every day in winter strewn with clean straw or hay, and in summer with green rushes.

Q. What places in England are now famous for carpets?

A. Axminster, Wilton, and Kidderminster; the art was brought to London in 1750, in the reign of George II., by two men, who quitted France in disgust.

Q. What is dyeing?

A. The art of staining silk, cloth, or linen, of various colours, by the mixture of different materials.

Q. How many colours are there that cannot be made by any mixture ?

A. Red, blue, and yellow, cannot be made, but they serve, added with a variety of other things, to form every other shade in colours.

Q. What colour will blue and yellow make ?

A. Green ; and if blue and red are mixed they will produce purple ; and red and yellow will form orange.

Q. Is the art of dyeing of very great antiquity ?

Yes : it was known in the earliest ages of the Jews, and by the Babylonians and the Egyptians.

Q. Was it not equally well known in Hindostan, Ceylon, and China ?

A. Yes, and carried by them to the greatest perfection ; and when Mexico was discovered, the art of dyeing or painting was equally well known to them.

Q. How was this proved ?

A. By their sending information of the arrival of the Spanish squadron on

their coast, to Montezeuma, by means of painting exact representations of their ships on cloth.

Q. Did they not, by means of this kind of picture writing, keep their records, histories, and calendars ?

A. Yes: they represented things that had bodily shapes, in their proper figures and colours; and those that had none, by some characters well understood.

Q. What city of Egypt was celebrated for the richness of its purple dye, so much valued by the ancients ?

A. Babylon, at no great distance from Cairo; they obtained it from a shell fish, called murex, or the purple fish.

Q. Are there many different species of this fish ?

A. Yes: and it is thought by this they obtained the three beautiful colours, called rose-purple, violet-purple, and hyacinth-purple.

Q. What different materials are used to obtain colours ?

A. Some are obtained from woods, as Brazil-wood affords red ; logwood, purple ; woad and indigo, blue dyes, and the saffron flower, yellow.

Q. What is indigo ?

A. A beautiful blue dye, prepared from the fluid or pulp of an annual plant, which is cultivated with great care in the East and West Indies, America, and Asia.

Q. What is stone-blue, used by laundresses ?

A. It is a preparation of indigo.

Q. What is logwood ?

A. A dark red wood, chiefly used in dyeing, and brought from Honduras, and some of the West India islands.

Q. Where does it chiefly grow ?

A. In forests where the soil is moist, or near the banks of rivers and lakes.

Q. What is woad ?

A. A plant which grows wild in Cambridgeshire, Somersetshire, and Durham ; the leaves are picked, ground, and reduced to a pulp, and formed into little balls, and exposed to the sun to dry.

Q. Is not this plant believed to be the same used by the Britons, to stain and paint their bodies with ?

A. Yes.

Q. Must not every substance be prepared before it receives the colour.

A. Yes, or it would wash out ; it is called the mordant ; alum is good for linens and cottons, and solutions from metals for silk and wool.

Q. Must it then be dipped in this mordant first ?

A. Yes, and well dried before it is put into the colouring liquor.

Q. What great good does this mordant effect ?

A. It firmly fixes the colour, and gives it greater brilliancy.

Q. What is alum ?

A. A very valuable salt, obtained from ores, or from earths, containing sulphur or clay, dug out for this purpose.

Q. What part of the world has the merit of this useful discovery ?

A. The East ; but since the reign

of Queen Elizabeth, it has been prepared and made in Europe.

Q. Why is it reckoned so very valuable?

A. Because it is used in so many manufactures, in dyeing, and tanning, also in preparing paints, in making candles to harden them, in making paper; by wine merchants, to fine their wine; and by bakers to whiten bread.

Q. Do not some insects yield a fine dye?

A. Yes: both cochineal and gum-lac.

Q. What is cochineal?

A. A most beautiful scarlet dye, produced from a small insect, about the size of a small pea, which is only found in Mexico and New Spain..

Q. How are they procured?

A. The cochineal insects adhere in great numbers, in a torpid state, to the leaves of the prickly pear; at a certain time of the year, they are carefully picked or brushed off by an instrument, in the form of a pen.

Q. Is not this a very tedious operation?

A. Yes: the persons employed in it are sometimes obliged to sit for hours beside a single plant.

Q. How does the cochineal appear in this country?

A. In the form of a reddish shrivelled grain, covered with a white bloom or powder; the male has wings, the female not.

Q. Will cochineal of itself produce such a brilliant colour?

A. No: it gave at first only a dull crimson colour, until a chemist, of the name of Kuster, discovered the art of preparing it with a solution of tin.

Q. What is carmine?

A. Only a preparation of cochineal.

Q. What is gum lac?

A. A resinous colouring substance like wax, produced by a species of ant, a native of the East Indies. The best lac is of a deep red colour.

Q. Where do these insects abound?

A. They are found upon trees on

both sides of the river Ganges, in India; the only trouble in getting them is to break down the branches of the trees and carry them to market.

Q. Are seed lac and shell lac the produce of the same insect as gum lac?

A. Yes: it is only differently prepared, and is much used in painting, dyeing, sealing wax, and varnish.

Q. What is varnish?

A. A compound of gum, mixed with spirits of wine, and other ingredients, laid upon wood, metal, and other bodies to make them shine; also used for setting a gloss upon cabinets, pictures, &c.

Q. What is the fine black varnish, so much used in China and Japan?

A. It is supposed to be the resinous juice of the cashea nut tree; whatever it touches it stains of a deep black colour.

Q. What is japanning?

A. The art of varnishing and painting ornaments on wood, metals, leather, and paper, prepared for the purpose.

Q. Why is it called Japan ?

A. Because the first pieces of this ware, which were brought to England, came from Japan and China.

Q. Where is Japan ?

A. In Asia ; it is a large country, composed of several islands in the North Pacific Ocean, very rich in gold, and noted for many curious customs.

Q. Mention some of these ?

A. Our common drinks are used cold, but theirs are all hot ; we uncover the head out of respect, and they the feet ; we are fond of white teeth, and they of black ; we get on horseback on the left side, and they on the right.

Q. Are they clever ?

A. Yes : and have a happy memory, but have such a peculiar language, that it is understood by no other nation.

Q. What is the emperor called ?

A. Dairo ; he resides at Miaco, in Nippon, wears a black habit, and a cap upon his head ; his feet must never touch the ground ; he never cuts his hair, beard, or nails ; and all his vic-

tuals must be dressed in new vessels.

Q. What do the Japanese principally trade in?

A. Gold, silver, cabinets, and other japanned and lacquered wares.

Q. But do not the French, and especially the English, imitate this art of japanning so well, as to render the trade now of little consequence?

A. Yes: Pontypool, Birmingham, and London, are famous for their tea trays, dressing boxes, cabinets, and snuff boxes.

Q. What is paint?

A. A mixture of oil and colours, so various, according to the style of painting designed, that it is impossible to describe them.

Q. Who invented painting in oil colours?

A. John Van Eyk, in Edward the Third's time, he discovered, accidentally, that his colours mixed better with oil than with water, and he excelled in producing a rich colouring.

Q. What is the meaning of painting on enamel?

A. It signifies the laying on of mineral colours upon gold, silver, copper, &c.

Q. What is gilding?

A. Gold laid on any surface by the way of ornament.

Q. How is this wonderful operation performed?

A. A bar of gold is made red hot, and beaten till it becomes as thin as paper; it is then divided into equal square pieces, and again forged or heated.

Q. What other process is necessary?

A. These squares are interlaid with leaves of vellum, and the gold beaten with the heaviest hammer, till it is stretched to the extent of the vellum.

Q. What follows?

A. These pieces of vellum are now crossed with leaves of the fine skin of an ox, properly prepared, five inches square, and the gold is again beaten till it is stretched to the size of the pieces of skin.

Q. Is this the whole of the operation?

A. Yes : nothing remains but cutting the edges even, and fixing the leaves of gold in books, the paper of which is well smoothed and prepared, that they may not stick to them.

Q. Is the gold beater's skin, which is used for healing cuts, the same which you have just mentioned, as prepared from the gut of an ox ?

A. Yes.

Q. What is printing ?

A. The art of making an impression upon one body by pressing it with another, leaving the characters or figures on paper, linen, silk, &c.

Q. How many kinds of printing are there ?

A. Several : it is an art daily improving : one method is from moveable letters ; another, by solid pages, casts of the above, called stereotype.

Q. What are these used for ?

A. The printing of books.

Q. How are pictures printed ?

A. Upon copper, steel, or stone plates, on which the picture is beautifully engraved.

Q. How are linens, calicoes, &c., printed.

A. From blocks of copper, wood, or stone, on which are cut, birds, flowers, or any other fancy patterns.

Q. What is engraving on stone called?

A. Lithography; it is of recent invention, and found to be very useful in ornamenting books, and various other things.

Q. What cities dispute the honour of giving birth to the men who claim the merit of the invention of printing.

A. Mentz, Haerlem, and Strasburg; it is generally thought the first attempts at printing were made in the latter city, by John Guttemburg, a native of Mentz.

Q. By whom was this invaluable art introduced into England?

A. By William Caxton, a merchant of London, who acquired the art during his travels abroad.

Q. In what city of England did Caxton establish the first printing press?

A. At Westminster, where it is said the first book he printed was on the game of chess.

Q. Who is said to have invented chess?

A. Ulysses.—William the Conqueror, King John, and Charles I., were doatingly fond of this scientific game.

Q. Do not printers use a peculiar kind of ink?

A. Yes: it is like a jelly, which is thinly spread upon leather cushions, and then dabbed upon the types.

Q. Does it not dry very quickly?

A. Yes: without running through to the other side, or blotting the letters.

Q. What is Indian ink?

A. An ink used in drawing, brought from China, in small oblong cakes, which on being dipped in water, and rubbed, makes a most beautiful black.

Q. How is it made?

A. It is a great secret, unknown to Europeans; but it is thought that it is

made of fine lamp black, and another substance like glue.

Q. Is there no other idea about this secret?

A. Yes: the cuttle-fish is furnished with a vessel that contains a quantity of dark inky fluid, and many think the Chinese make Indian ink of this, perfumed with musk and other things.

Q. What is lamp black?

A. A soot prepared by burning the dregs and coarser parts of tar in furnaces, the smoke is carried through tubes into boxes covered with linen; upon which it settles.

Q. What is then done?

A. This soot is carefully beaten off into boxes, and afterwards packed in barrels for sale.

Q. What is it principally used for?

A. In printing and dyeing; it received its name from formerly being made by means of lamps.

Q. What is ivory black?

A. Burnt ivory or bones, which becoming quite black, and reduced to

thin shavings, are ground in water to powder.

Q. What is it useful for?

A. Both painters and jewellers make great use of it.

Q. What is lime?

A. It is a substance found in spars, shells, stones, marbles, and chalk; it becomes lime by being burnt for a long time, after which it is called quick-lime.

Q. What is its principal use?

A. To make mortar; it is also useful in medicine and in several manufactures.

Q. What are bricks?

A. They are made of a rich yellowish earth or clay, well mixed and prepared, then called loam.

Q. How are they formed?

A. In wooden moulds, and are dried by being placed in the open air.

Q. Are they then fit for building?

A. No: they must be piled into square heaps, with cinders and straw between each brick, to keep them hot, and then burnt.

Q. How long will they require burning?

A. Two or three weeks to do them thoroughly.

Q. What are these square heaps of bricks called?

A. Clumps; but the best bricks are burnt in kilns, by means of a hot furnace underneath them.

Q. When used for buildings, how are they joined together?

A. By mortar.

Q. What is mortar?

A. It is made by mixing lime, sand, and cut horse hair, with water: this mortar is used for plastering.

Q. What is the difference between that and what is used for cement?

A. No hair is used in the latter.

Q. What are tiles?

A. A sort of thin brick, made of clayey earth, moulded of a certain thickness, dried, and burnt in a kiln.

Q. What are slates?

A. A sort of stone, which splits into thin plates, and is used for covering buildings instead of tiles.

Q. How are they fastened to the roof?

A. By pegs driven through them, and they are made to lap over each other at the edges, in order to keep out the rain.

Q. What county produces the best slate?

A. Westmoreland.

Q. What is whitening?

A. Pounded chalk.

Q. What are flints?

A. Hard stones, found in pieces of different sizes, and commonly among chalk.

Q. What are they principally useful for?

A. To burn into powder, to mix with clays in making china, and instead of sand to melt them into glass.

Q. Have they not become very valuable in making the finest roads?

A. Yes: by being broken into very small pieces, they form a road as hard as a rock.

Q. Are not walls, and sometimes houses, built of flints?

A. Yes.

Q. How are gun flints made?

A. By simply striking the flint stone repeatedly with a kind of mallet, and bringing off at each stroke a splinter, sharp at one end, and thicker at the other.

Q. How many flints can a good workman make in a day?

A. One thousand; he shapes them by laying a line along where it is wished they should break, upon a sharp instrument, and then giving it small blows with the mallet.

Q. What is Portland stone?

A. It is a stone obtained from a mass of rocks, named the Isle of Portland, in Dorsetshire.

Q. What is Portland stone generally called?

A. Free-stone, because it does not split as some do, but may be freely cut any way.

Q. Does not this render it one of the best stones for building?

A. Yes: besides which, on its be-

ing exposed to the air, it becomes hard and beautifully white.

Q. What public buildings in London are built of it?

A. The bridges, St. Paul's Cathedral, the Monument, Whitehall, &c. After the great fire of London, Sir Christopher Wren brought it into general use.

Q. What other place in Dorsetshire is noted for its stone quarries?

A. Purbeck, near Portland; the stone is very useful for paving the broad foot paths in the streets.

Q. What is granite?

A. A valuable stone noted for its hardness and durability; it is abundant in Cornwall, and forms the summits of most of the highest mountains in the world.

Q. What are its uses?

A. The carriage way of the streets of London are paved with it, on account of its strength; millstones, steps, &c., are made of it.

Q. Has the weather any effect upon it?

A. Very little; and this induced the proprietors of Waterloo bridge to use it for that noble structure, as also for the new London bridge.

Q. What do you mean by gems?

A. Precious stones.

Q. Which are esteemed the most valuable gems?

A. The diamond, ruby, emerald, and sapphire, then the amethyst, topaz, and aqua-marine, are considered of equal value, and the garnet is the cheapest.

Q. What is the peculiar property of the diamond?

A. It is the hardest and most brilliant of all natural productions, and can only be cut and polished by its own powder.

Q. What did the ancients call it?

A. Adamant; and all the precious stones were known to them by the same names we call them.

Q. In what holy book are all these stones enumerated?

A. In the Bible; they formed the breast-plate of Aaron, the high-priest.

Q. What was this breast-plate called ?

A. The urim and thummin; these words mean, *light* and *perfection*.

Q. What was engraved on each of these stones ?

A. The name of one of the tribes of Israel: they declared the pleasure of the Almighty by shining brilliantly, or appeared dull, when he disapproved.

Q. Who taught the Israelites the art of working gold and precious stones ?

A. God himself, who inspired one of the tribe of Judah, with the knowledge of cutting stones, setting in gold and silver; also, carving in wood.

Q. Where are diamonds found ?

A. The best come from the East Indies; but they are also found in Borneo and in several parts of South America.

Q. Which are the principal mines ?

A. Those of Raolconda and Cou-lous, in the province of Golconda, part of the Mogul's empire, and that of Sou-melpour, or Goyal, in Bengal.

Q. Where is the Mogul's empire?

A. In Hindostan, in Asia.

Q. How are diamonds discovered?

A. By men, who by means of long iron rods, with hooks at the end, draw them out of the crevices of rocks, and afterwards wash them in tubs.

Q. Pray are they found bright?

A. No: they are covered with a thick earthy crust.

Q. How is this removed?

A. By polishing: the value of a diamond increases with its weight and colour.

Q. Who possesses the largest diamond ever known?

A. The Queen of Portugal; it weighs more than eleven ounces, and was found in Brazil.

Q. Has not the Great Mogul a very fine one?

A. Yes: in form and size, it resembles half a hen's egg; there is one also in the sceptre of the Emperor of Russia, of the size of a pigeon's egg.

Q. What story is told of this diamond?

A. It was once placed as the eye of an idol, in Seringham, in the Carnatic ; a French grenadier contrived to become one of the priests to the idol, and stole it.

Q. What is the famous Pitt diamond ?

A. It was a magnificent one, purchased by a Mr. Thomas Pitt, and sold by him to the Regent Duke of Orleans, for 135,000*l*.

Q. Is the diamond only useful as an ornament ?

A. No ; it is used by lapidaries for slitting hard stones ; also, for cutting and engraving other gems, and in the finer kind of clock-work, as well as cutting glass, among glaziers.

Q. What do you mean by a lapidary ?

A. It is his business to cut into shape, and polish these gems, or precious stones, which is done by grinding them on a wheel with diamond powder.

Q. Does he set them ?

A. No ; this is the business of the jeweller, and requires great taste.

Q. What is the ruby ?

A. A precious stone of a bright red colour.

Q. Where is it found ?

A. In the sand of a certain river in Ceylon, and near the town of Sirian, the capital of Pegu.

Q. Where is Ceylon ?

A. An island in the Indian ocean.

Q. Where is Pegu ?

A. A country in the Eastern Peninsula of India,

Q. What is the emerald ?

A. A very rare gem of a dark green colour, brought also from Pegu, and other parts of the East Indies.

Q. Where do most of the emeralds that are now brought to Europe come from ?

A. They are obtained from a mine in the valley of Tunca, between the mountains of New Grenada, and Popayan, in South America.

Q. What was the size of the largest emerald mentioned ?

A. It was as big as an ostrich's egg, and was worshipped by the Peruvians under the name of the Goddess, or Mother of Emeralds.

Q. Did they not bring the smaller ones as offerings to it?

A. Yes; and the priests called them the daughters of the large one.

Q. What is the sapphire?

A. A beautiful gem of a fine blue colour, brought from the East Indies, and the island of Ceylon, where it is found in the sand of the rivers.

Q. What is the amethyst?

A. The oriental amethyst is an extremely rare gem, of a rich purple colour.

Q. But what is the common amethyst, which is chiefly seen?

A. It is a violet-coloured rock crystal, highly polished and transparent, cut into beautiful stones for necklaces, bracelets, ear-rings, &c.

Q. Where do they come from?

A. The most valuable from India and Ceylon, but the greater number

from Brazil and Peru, in South America.

Q. What is the topaz ?

A. A gem of a bright yellow colour, but there are orange, pink, and blue topazes.

Q. Where do the finest come from ?

A. Brazil, Saxony, and many parts of Europe. Brazilian topazes, by being exposed to great heat, become pink.

Q. Are they much valued ?

A. No; they are too common to be thought much of by the lapidary or jeweller.

Q. What is the beryl, or aqua marine ?

A. It is a stone of a light sea green ; the most beautiful are brought from the borders of China, and from Siberia and Brazil.

Q. What people hold the large ones in great esteem ?

A. The Turks, who value them for the handles of their stilettoes.

Q. Is not the garnet a very fine stone ?

A. Yes ; it is a gem of a dark crimson colour ; the best are brought from Bohemia, where there are mines of them ?

Q. Where is Bohemia ?

A. A fine kingdom in Germany.

Q. What is the cairn gorum ?

A. A stone obtained from a mountain of that name, in the county of Aberdeen, in Scotland.

Q. Are they in much repute ?

A. Yes ; they are nearly as valuable as topazes, and if of a good colour, clear, and large, they are sold at a high price for seals, necklaces, &c.

Q. What is the cornelian ?

A. A stone in great request for seals, beads for necklaces, &c., usually of a red colour, though sometimes white, orange, or yellow.

Q. Where are they found ?

A. In most countries ; but the finest come from India, and form a considerable branch of trade.

Q. What is the chrysoprace ?

A. A beautiful stone of a delicate

apple green colour, much prized by jewellers, brought from Silesia in Germany.

Q. What are opals ?

A. A half transparent kind of stones which have a milky cast, and when held betwixt the eye and light, appear blue, green, red, and yellow.

Q. Where are these very beautiful stones obtained ?

A. The principal opal mines in the world are those of Hungary, but they are found in other parts of Europe, and also in Sumatrace, and the East Indies.

Q. What is the turquoise ?

A. A beautiful light blue substance set in rings, &c., and very fashionable now in all female ornaments.

Q. In what country are they very common ?

A. In Persia, and the Turks value them highly, and constantly wear them in some part of their dress, and particularly to adorn the handles of their stilettos.

Q. Where is there a mine of these stones?

A. At Neshabour, south of Meschid, in Persia.

Q. From what country are they brought into England?

A. From Russia, and they are stuck with pitch upon the ends of straws, because if mixed, the purchaser would not so easily observe their colour, which is their chief value.

Q. Can they be easily imitated?

A. Yes; in paste, and are often imposed upon the ignorant purchaser.

Q. What are pearls?

A. They are formed in the shells of a large oyster, in consequence of some outward injury the shell has received.

Q. How is this proved?

A. Because the pearls are always found just in these places, and there is a small worm which will work its way quite through to the animal.

Q. And does this cause them?

A. It is so thought, for if the shell

looks quite smooth and uninjured, it is not likely to contain any pearls.

Q. Where does these oysters abound ?

A. In the seas about the East Indies, and particularly in the Persian Gulf.

Q. Where are the richest pearls produced ?

A. At Ormes, an island at the entrance of the gulf of Persia.

Q. Are they easily obtained ?

A. By no means, for these oysters lie at the bottom of the sea, and can only be got at by diving.

Q. What do you mean by diving ?

A. Men sinking themselves by tying stones to their bodies, in the places where the fish are supposed to lie.

Q. What do they do when arrived at the bottom ?

A. They begin filling a bag of network, which is hanging round their necks, with the oysters, for they go down into the water with their eyes open.

Q. But do they not soon lose their breath?

A. Some are able to hold it five minutes, but others can only remain under water about two.

Q. How do they get up when exhausted?

A. They pull a rope which is fastened to them, as a signal to their companions in the boat, to draw them up.

Q. How often will they go down in a day?

A. Forty or fifty times, and at each plunge will return with more than a hundred shells.

Q. How many pearls will one shell contain?

A. Sometimes a hundred, large and small, but often more than a hundred will be opened and not a single pearl of value found.

Q. How do they get the pearls out of the oysters?

A. When they have got a great many oysters, they are placed in heaps on the shore, covered with sand, where they continue about ten days.

Q. What does this cause?

A. The fish decay and open, and the sand being sifted, the pearls are found.

Q. What is then done with them?

A. They are cleaned, polished, and bored, and washed in salt and water, to remove any stains.

Q. How is the value of pearls estimated?

A. By their size, roundness, colour and brightness, and it is a difficult task for the pearl merchants to class them.

Q. Which were the most renowned pearls ever mentioned?

A. The two which formed Cleopatra's ear-rings.

Q. What was the value of these two pearls?

A. It is recorded by Pliny, that the value of each, was fifty-two thousand pounds sterling.

Q. What did she do with one, to transmit her boundless extravagance to posterity?

A. She gave an entertainment to her favorite Antony, which she declared should cost upwards of fifty thousand pounds.

Q. How did she contrive to expend this immense sum on one feast?

A. Every thing appeared very costly and magnificent, yet there was nothing which could cost that sum.

Q. What observation did Antony make upon this?

A. He began to joke, when Cleopatra commanded him to be patient: "what you see, added she," is only the first course; "I myself will sup on that sum."

Q. What did she mean?

A. She gave a signal, when two beautiful boys, superbly dressed, brought her a magnificent vase, studded with diamonds, which contained a strong vinegar.

Q. What use did she make of it?

A. The Queen took from her ear one of her magnificent pearl ear-rings, and throwing it into the vase, watched

with delight the gradual melting of this precious jewel; after which, gracefully drinking to the health of Antony, she swallowed the costly draught.

Q. What became of the remaining pearl?

A. It was found among the treasures of which Cæsar possessed himself, and was sawn in two for ear-rings, for his daughter Julia.

Q. Was not this a proof, its equal could not be obtained?

A. Yes.

Q. But is there not another story respecting this famous pearl?

A. Yes, it was said to have been divided for the decoration of the image of Venus, the most perfect piece of sculpture of Praxiteles.

Q. What was this image celebrated for?

A. It was of marble, so brilliantly white, and so entirely resembled life, that it appeared as if really animated.

Q. Who was Praxiteles?

A. A famous Grecian sculptor.

Q. What pearls do the English consider as most valuable?

A. Those brought from the fishery of Ceylon.

Q. Are not pearls found in great Britain?

A. Yes, in the river Conway, in Wales, and on the shores of the Jay, and other parts of Scotland.

Q. What is mother of pearl?

A. The inner part of the shell of the pearl oyster.

Q. Is not this shell extremely brilliant and smooth on the inside?

A. Yes, and it has the same lustre on the outside, when the scales have been cleared off by aquafortis, and the lapidary's mill.

Q. What is its use?

A. It is made into snuff-boxes, buttons, spoons, fish, and counters, for card-players, and is an article of great traffic with China.

Q. What are the beads called Roman pearls?

A. They are beads cut from thin laminæ of alabaster, and then dipped into a composition, made of the scales of a fish, called the argentina.

Q. Is not the imitation extremely good ?

A. Yes: for they can copy the accidental defects of colour and form which occur in the real gem, as well as its brilliancy, so exquisitely as to deceive even a practised eye.

Q. What is their great defect ?

A. They are very heavy.

Q. Where is this most curious manufacture carried on ?

A. At Rome, which is the reason of their being called Roman pearls.

Q. What is tortoise-shell ?

A. The hard, horny covering of the tortoise, used in in-laying, and in various other works, such as snuff-boxes, combs, &c.

Q. What is coral ?

A. A beautiful branched substance, formed at the bottom of the sea, by small animals, called polypes, and it is their habitation.

Q. What is it like ?

A. The red coral looks like branches of red sealing wax.

Q. What is it principally used for ?

A. To cut into beads, for ornaments, &c.

Q. Where is this wonder found ?

A. In the Red sea, between Asia and Africa, and many parts of the Mediterranean, particularly about Marseilles, Tunis, Sardinia, &c.

Q. Where is Marseilles ?

A. A sea port of France, in Provence.

Q. Is there not white coral ?

A. Yes ; but it is of little value, and chiefly found on the shores of Ceylon.

Q. Have there not been many beautiful pieces of sculpture in coral ?

A. Yes ; the finest specimens known are a chess-board and men, in the Tuilleries.

Q. What is ivory ?

A. The tusks of elephants ;, they are much longer in the male than the female.

Q. What island produces the best?

A. The whitest, smoothest, and most compact ivory, comes from Ceylon, it also never turns yellow.

Q. What is the great use of ivory?

A. For making boxes, dice, fans, ornamental utensils, &c.

Q. What people excel in carving ivory?

A. The Chinese and Indians.

Q. What is amber?

A. A substance usually of golden yellow colour, found on the south coast of the Baltic, Sicily, and the Adriatic.

Q. Is it not sometimes dug out of mines?

A. Yes: there is a fine mine in Prussia, and there is a gum so nearly like amber, that it can scarcely be distinguished from it.

Q. Is it exactly known what amber is?

A. No; but from the insects often found in it, it is supposed to have once been in a fluid state.

Q.

Q. What is eau-de-luce?

A. Oil of amber, mixed with sal ammoniac.

Q. What is sal-ammoniac?

A. A salt formerly brought from Egypt, in the form of conical loaves, or round cakes.

Q. From what did it derive its name?

A. From being found in great abundance among the sand, near the temple of Jupiter Ammon, in Africa.

Q. How is it now made in Europe?

A. By burning at the same time soot, bones, oil, and salt, with other substances.

Q. Is it applied to many useful purposes?

A. Yes; it is used in medicine, and by dyers, to give brilliancy to many of their colours, also by copper smiths and tanners, to clean the surface of metals, &c.

Q. What is amber-gris?

A. A substance found in the inside of a particular kind of whale; its smell is extremely powerful.

Q. What is it thought to be ?

A. A disease of the fish.

Q. What is its use ?

A. It was formerly used in medicine, but it is now chiefly used for a perfume.

Q. What is musk ?

A. A strong perfume, found in a bag about the size of a small egg, under the belly of an animal shaped like a deer, but without horns.

Q. Is it a valuable drug ?

A. Yes: it is now chiefly used in medicine for spasms, convulsions, &c., the perfume being too strong to be agreeable.

Q. Where is this animal found ?

A. In Thibet, Tonquin, Siberia, and Bantam; they kill the animal, cut off the bags, and tie them closely up.

Q. Where is Bantam ?

A. A large town in the island of Java.

Q. To whom does this island belong ?

A. To the Dutch, who send a quan-

tity of pepper from it, to all parts of the world every year.

Q. What is camphor?

A. It is the white resinous juice of a tree of the bay tribe, growing in China, Japan, and the islands of Sumatra and Borneo.

Q. How is it procured?

A. In various ways; it is found in every part of the trees, and the largest pieces are picked out with knives.

Q. Is not camphor much used in medicine?

A. Yes; and its strong delightful smell is so disagreeable to insects, that they always avoid it.

Q. What is the otto of roses?

A. The oil of the flower whose name it bears.

Q. How is this charming scent procured?

A. A clean cask or earthen jar is filled with rose leaves, and spring-water is poured upon them, just sufficient to cover them.

Q. What is done with this vessel?

A. It is set in the sun for two or three days, and taken under cover during the night.

Q. What is the consequence of its exposure to the sun ?

A. At the end of the third or fourth day, small particles of yellow oil will be seen floating on the surface of the water, which in a week will have increased to a thin scum.

Q. What is done with this scum ?

A. It is taken up by a little cotton tied at the end of a stick, and squeezed into a phial, and this is what is called otto of roses.

Q. What place is noted for the roses of which this expensive perfume is made ?

A. Herat, a town in Persia, noted also for its beautiful carpets.

Q. What is myrrh ?

A. A gum obtained by incision from a tree resembling the acacia ; it grows on the eastern coast of Arabia Felix, and that part of Abyssinia near the Red Sea, also in the Levant and the East Indies.

Q. Is it not reckoned a perfume, as well as a most valuable medicine ?

A. Yes: it has an aromatic smell when burnt, and a bitter taste when taken into the stomach, which it warms and strengthens.

Q. Was it not one of the gifts offered by the wise men to our Saviour ?

A. Yes ; they presented to him gold, frankincense, and myrrh.

Q. What did they mean by these offerings ?

A. Gold signified Christ to be a king ; myrrh being used in embalming the dead, to prevent putrefaction, signified he was to die, and the incense represented him to be God.

Q. What is frankincense ?

A. A gum, which upon the application of heat, emits a most fragrant smell.

Q. Of what place is the tree a native ?

A. Of Syria and Arabia.

Q. What is opium ?

A. A gummy juice obtained by in-

cisions from the head of the papaper somniferum, or white poppy.

Q. How is it prepared?

A. The plant is wounded, and the juice is scraped off as it oozes out, and is put into earthen vessels, and worked about with the hand in the open sunshine.

Q. What does this effect?

A. It becomes of a consistency sufficient to form into balls, cakes, &c., which are further dried.

Q. From whence is it brought?

A. It is imported from Persia, Arabia, and other warm parts of Asia, in flat cakes, covered with poppy or tobacco leaves to prevent them from sticking together.

Q. Is it not considered one of the most valuable medicines known?

A. Yes: for it is chiefly used as a remedy for procuring sleep, and lessening pain, which it does in a most remarkable manner.

Q. Is it not also a deadly poison?

A. Yes; if taken in large doses?

Q. What people are passionately fond of it?

A. The Asiatics and the Turks.

Q. What is laudanum?

A. A liquid preparation from opium and spirits of wine.

Q. If taken accidentally, what is the best remedy?

A. To drink freely of acids and coffee, and not yield to the desire of sleeping.

Q. What is tobacco?

A. The dried leaves of a beautiful annual plant, which requires great care in the cultivation.

Q. Where does it grow?

A. In many parts of North America, and in the West Indies.

Q. From which of the islands did it receive its name?

A. From Tobago, one of the Caribbees; but very little, if any, now comes from it.

Q. Who first introduced the use of it into England?

A. Sir Walter Raleigh, in the reign of Elizabeth.

Q. What people smoke this plant, and consider it a great luxury?

A. The Germans, and Dutch, and the lower class of English.

Q. What is snuff?

A. Only tobacco, ground to a very fine powder, and scented.

Q. What is rhubarb?

A. The root of a tree, which grows wild in Turkey in Asia, and Arabia Felix: it is a very valuable medicine.

Q. Is it the same plant which is used for pies and tarts, in the spring?

A. No, that species grew wild on the mountains of Rhodope, in Thrace; and is now cultivated in kitchen gardens, for the sake of the stalks.

Q. What is magnesia?

A. It is prepared by dissolving Epsom salts in water, and adding to the solution half their weight of potash.

Q. How does this produce magnesia?

A. The substance which sinks to the bottom, when washed well with

water, and dried, becomes a light, soft, and white powder, without taste, which is called magnesia.

Q. What is Epsom salt?

A. It is found in masses, on rocks and stones, or dissolved in mineral waters, at Epsom, in Surry, and Sedlitz, in Bohemia; the taste is bitter, and unpleasant.

Q. What is senna?

A. The dried leaves of an annual plant, brought from Alexandria, and from Ghezan, in Arabia Felix, which are made up into a valuable medicinal tea.

Q. What is ipecacuanha?

A. The root of a tree, found only in Brazil; used also in medicine.

Q. What is Peruvian bark?

A. The bark of a tree, growing in Peru: it is called by the Spaniards, fever wood.

Q. Why?

A. Because of its extraordinary virtue in removing all kinds of fevers, and agues.

Q. What do the Indians call this tree?

A. The fuddling-tree, because it is said to intoxicate all the fish in the water, where the wood, or bark has been steeped.

Q. What other name is it also known by?

A. That of jesuit's bark, because it was first introduced into Europe by some persons of that religious order.

Q. What King was cured by it of a fever, when Dauphin of France?

A. Lewis the fourteenth.

Q. What are aloes?

A. The juice of the socotrine aloe, prepared from the leaves when fresh cut, which juice, when dried in the sun, becomes a hard substance.

Q. Is not this also a valuable medicine?

A. Yes: and this aloe grows in abundance in the island of Socotra, near the mouth of the Red Sea.

Q. What beautiful colour do the leaves of the socotrine aloe afford?

A. A violet, which does not require any mordant to fix it.

Q. By what people is the aloe dedicated to the offices of religion ?

A. By the Mahometans and Egyptians ; and pilgrims on their return from Mecca, hang it over their doors, to shew that they have performed that holy journey.

Q. What is the balm of Mecca ?

A. A costly gum resin, brought from Arabia, and Turkey, of a very grateful taste and flavour, used in medicine.

Q. What is the balm of Gilead ?

A. The dried juice of a low shrub, growing in Abyssinia and Syria.

Q. Is it not very scarce and valuable ?

A. Yes ; for the quantity of balsam yielded by one tree, never exceeds sixty drops a day.

Q. Was it not in great esteem in ancient times ?

A. Yes, for Josephus informs us, the balsam of Gilead was one of the

trees given by the Queen of Sheba to King Solomon.

Q. What is it good for ?

A. To strengthen the stomach and excite the spirits.

Q. What is quassia ?

A. A drug, the root of a tree so called from a slave of the name of Quassi, who used it with great success in the malignant fevers which prevail in Surinam.

Q. What part of the tree is made use of in medicine ?

A. The root, bark, and wood ; it is a valuable drug in nervous diseases.

Q. What country is it a native of ?

A. The colony of Surinam, and South America generally.

Q. What is assafoetida ?

A. A valuable medicinal gum, produced from a plant resembling the cauliflower.

Q. Where does it grow ?

A. Most plentifully on mountains in the provinces of Chorassan, and Laar, in Persia.

Q. Is not the process of obtaining it very curious?

A. Yes : the top of the roots of the oldest plants must be cleared, and then the leaves and stalks are twisted together to screen it from the sun.

Q. How long does it remain in this state?

A. Forty days, when the top of the root is cut off, and it is again screened for forty-eight hours, when a fine juice can be scraped off, which is exposed to the sun to harden.

Q. How often is this operation performed on the same plant, in order to gain the juice?

A. Eight times, which occupies a period of six weeks; it is of a most nauseous smell and taste.

Q. What is goulard?

A. It is prepared from lead, and is of great use in allaying inflammations.

Q. What is gum benzoin?

A. A thick, whitish, resinous juice, which oozes from a tree which grows chiefly in the island of Sumatra.

Q. Does it not form the principal ingredient of what is called Friar's Balsam ?

A. Yes: the properties of which, for healing fresh cuts, are well known.

Q. Is it not also used in making court-plaster ?

A. Yes: isinglass is dissolved and laid on with a brush upon thin black sarsnet, which is afterwards washed over with a weak solution of benzoin in spirits of wine.

Q. What countries use great quantities of gum benzoin ?

A. Where the Roman Catholic and Mahometan religions prevail, it is burned as incense in their churches and mosques.

Q. What is storax ?

A. A fragrant balsam, like benzoin, used in medicine, and burnt as a perfume.

Q. What is gum guaiacum ?

A. The resin of a large West Indian tree, every part of which is useful, the bark, resin, and flowers, being used as

medicine, and the wood is most valuable to the turner.

Q. What is hartshorn?

A. It was formerly obtained only from the horns of deer, but is now chiefly prepared from bones.

Q. What are cantharides, or Spanish flies?

A. An insect about an inch in length, valuable as being used for blistering plasters.

Q. From whence are they brought?

A. We receive them in a dried state from Spain, Italy, and the South of France.

Q. How are they collected?

A. Very easily; for during the day they are in a torpid state, and are shaken from the trees upon a cloth spread on the ground.

Q. How are they destroyed?

A. When a number has been collected, they are tied in bags, and killed by being held over the steam of hot vinegar, and then dried in the sun.

Q. Have they not a very powerful and nauseous smell?

A. Yes : and before being used for a blister they are pounded.

Q. What are leeches ?

A. A worm-shaped animal, found in muddy waters ; in much use in medicine for drawing or sucking blood, which they do with three sharp little teeth.

Q. Where are they found ?

A. In several of the rivers in the south of England.

Q. How are they caught ?

A. In various ways ; but one of the best is to throw bundles of weeds into the water where they are, these if taken out a few hours after, numbers will be found sticking to them.

Q. What is arsenic ?

A. A most deadly poison, found abundantly in mines, in Cornwall and Devonshire : a few grains will prove fatal, and it has been often mistaken for salts, or white sugar.

Q. What is dragon's blood ?

A. A red kind of resin, forced out of the fruit of the rotang plant, when

exposed by the Japanese over the steam of boiling water.

Q. Is it not a curious plant ?

A. Yes : it is a species of cane, and grows the length of a hundred feet, about as thick as a man's arm ; it is chiefly used in medicine.

Q. What is castor oil ?

A. It is an oil obtained by pressing the seeds of a plant growing in both the East and West Indies.

Q. Is it not a valuable medicine ?

A. Yes : the seeds are bruised in a mortar, afterwards tied in linen bags, and boiled in water until the oil rises to the top, which is carefully skimmed off, and bottled.

Q. What is mastic ?

A. A fine gum, brought from Scio, an island in the Archipelago, and the Levant; the Turkish women chew it to make their teeth white, and burn it with other fine gums as a perfume.

Q. Which are the principal metals ?

A. Gold, silver, platina, copper, iron, lead, and tin.

Q. What are the most precious of all these metals ?

A. Gold, and silver.

Q. Which is the heaviest, hardest, and most difficult to be melted ?

A. Platina.

Q. Which is the lightest ?

A. Tin.

Q. Which is the most useful ?

A. Iron.

Q. Why ?

A. Because no instrument, machine, or scarcely any thing else can be made without the help of it.

Q. Where does gold come from ;

A. It is found in most hot countries, New Mexico, in North America, the East Indies, and Brazil.

Q. Is not gold sometimes found in the sand, and mud of rivers ?

A. Yes : particularly in Guinea, in Africa ?

Q. Which are the principal gold mines in Europe.

A. Those of Hungary, and Saltsburg ; Spain is also thought to be very

rich in gold, but since the discovery of America, the mines have not been worked.

Q. Has the value of gold been long known ?

A. Yes, from the earliest ages of the world : it is used for our coinage, and is employed principally in jewelry and gilding.

Q. What is silver ?

A. A white brilliant metal, chiefly found in the mines of Potosi, in South America : there are several good mines in Norway, and Sweden, but they are not worked now.

Q. Is not silver the most precious of all metals next to gold ?

A. Yes, and it is also like gold, coined into money, and manufactured into various utensils, such as goblets, vases, spoons, and dishes.

Q. What renders both gold and silver so very valuable, and useful ?

A. Their ductility or capability of being drawn out without breaking, into a wire much finer than a human

hair, or beat into leaves, so fine that they will hardly bear touching.

Q. When beaten so delicately fine, what is it used for?

A. Gilding.

Q. What is platina?

A. A white metal, not so bright as silver, found only in small grains, or scales, in the sands of some of the rivers of South America.

Q. If it could be obtained in sufficient quantities, would it not be very valuable and useful?

A. Yes: for its ductility is as great, if not greater, than gold or silver, and like them, it will not rust.

Q. Which are the perfect metals?

A. Gold, silver, and platina.

Q. Why are these called perfect?

A. Because they lose nothing in weight or value, by the heat of the fire.

Q. Does not this mean that they are not destroyed or wasted by being melted in the fire?

A. Yes.

Q. Is this the case with other metals?

A. No: they are all changed by fire into a powdery kind of matter, called calx.

Q. Are not these then called the imperfect metals?

A. Yes; for they loose by the heat of the fire, and can easily be dissolved or corroded by acids.

Q. What do you mean by the word corrode?

A. To rust, or eat away by degrees.

Q. What is an acid?

A. Any thing sour or sharp.

Q. What is iron?

A. A well known metal; its value and uses were familiar to the people in the time of Moses, who tells us of swords, knives, &c., which were made in his time.

Q. Where is iron produced?

A. The finest iron mines at present, are those in Great Britain and France.

Q. But is it not found in most of the countries of Europe?

A. Yes; as well as in almost every country in the world.

Q. Where are the best iron mines in England?

A. Colebrook Dale, in Shropshire, and the forest of Dean, in Gloucestershire, afford us a fine supply.

Q. How many sorts of iron are there?

A. Three; forged iron, cast iron, and steel?

Q. What do you mean by forging iron?

A. It is beating it out with large hammers when red hot.

Q. What effect has this on the iron?

A. It becomes softer, and more flexible, and is very easily bent.

Q. What is cast iron?

A. It is iron melted to a liquid in very hot furnaces.

Q. But how is it cast into cannons, pipes, pots, gates, and the numerous forms we see it in?

A. By shapes being made of a kind of loam or earthy substance, of the various forms wanted, and the melted

liquid flows from the furnace into them.

Q. When cold, I suppose these moulds are removed?

A. Yes, and the iron is in the shape wanted.

Q. What is the difference between wrought iron and cast iron?

A. Wrought iron is only heated and beaten into shapes; cast iron is melted, and run into moulds.

Q. What emperor learnt the trade of a blacksmith, in order to set an example to his subjects?

A. Czar Peter the Great, Emperor of Russia, in the reign of our William and Mary.

Q. At what place did he perform this laborious work?

A. At Istia, a place not far from Moscow, where he once passed a month; and also at Olonetz, situated on the side of Lake Ladoga.

Q. When he worked at the forge, what did he make the boyards or noblemen do?

A. He obliged them to blow the bellows, stir the fire, carry coals, and perform all the other offices of black-smiths.

Q. Is not iron of far more real value than gold?

A. Yes; for without it the earth could not have been cultivated, nor houses, cities, and ships built; and few arts could have been practised.

Q. What is steel?

A. It is only a more perfect kind of iron, formed by heating bars of iron with charcoal ashes and bone shavings.

Q. For what purpose is this done?

A. To render it whiter, and of a much finer and closer grain, after which it will bear a very high polish.

Q. How does steel acquire its extreme hardness and brittleness?

A. By being plunged when hot into cold water; but if it is suffered to cool slowly, it becomes soft.

Q. What does the hardness of steel render it capable of?

A. Receiving a very sharp edge;

which makes it particularly useful for the blades of all instruments for cutting; such as swords, knives, razors, and scissars.

Q. What is emery?

A. A hard heavy iron ore, found in large masses, mixed with other minerals; the best comes from the Levant, and the isle of Naxos, in the Archipelago.

Q. How is it prepared?

A. It is ground in mills into a very fine powder, and is used by lapidaries in the cutting and polishing of precious stones.

Q. Is it only useful to lapidaries?

A. No; it is used in smoothing the surface of the finer kinds of glass; by cutlers, in polishing of iron and steel instruments; by masons, in the polishing of marble, and by numerous other artisans.

Q. Is not the loadstone, or leading stone, a kind of iron?

A. Yes: it is a rich iron ore, found in iron mines, in Germany, England, Arabia, and Bengal.

Q. What are its properties ?

A. It attracts iron, giving it an inclination towards the north, and even enabling a needle touched with it, to point towards the poles of the earth.

Q. Has it any other property ?

A. Yes ; every magnet has two poles, one always pointing to the north, and the other to the south ; this circumstance has rendered it of the greatest use in navigation.

Q. Does the needle point exactly to the true north and south ?

A. No ; it is called the magnetic north and south, and points about twenty degrees to the west of the true north and south.

Q. What is navigation ?

A. The art of directing any vessel by water, from one place to another.

Q. Has then the discovery of the magnet enabled sailors to venture into the great ocean, far away from any land ?

A. Yes : by means of the mariner's compass, they can find their way with

as much ease in the midst of the ocean, as they formerly did when they never lost sight of land.

Q. What is the mariner's compass?

A. A round brass box, in which is placed a paper card, on which are marked thirty-two points, and the valuable needle or magnet, which always turns to the magnetic north.

Q. Has any one ever discovered the cause of this extraordinary property?

A. No.

Q. What is copper?

A. A red coloured metal, and the most sonorous of all the metals.

Q. Where is it found?

A. The best is found in the Swedish mines; but the largest mine is upon a mountain in the isle of Anglesea.

Q. But is not copper found in every part of the world?

A. Yes; and is very abundant in several places in Great Britain, besides Anglesea.

Q. How many kinds of copper are there?

A. Three: the common, the rose copper, and the virgin copper.

Q. Do all these three kinds come from the same mine?

A. Yes: the difference between them is in the preparation.

Q. Is not copper sometimes mixed with other metals?

A. Yes: it forms several compound or mixed metals.

Q. What is bell-metal?

A. Copper mixed with a large quantity of tin; it is so called from bells being made of it, and is very hard and sonorous.

Q. What is bronze?

A. Copper mixed with a less quantity of tin: this composition must have been known in very early times.

Q. Why?

A. Because it is mentioned in the Old Testament; and also we learn from Homer, that in the Trojan war, the combatants had no other armour than what was made of bronze.

Q. Is not this a little doubtful?

A. Perhaps so, as the Greek word "chalkos," frequently signifies brass, and it is very likely that the word as used by them, meant iron as well as brass.

Q. What is pinchbeck, or prince's metal?

A. Copper mixed with zinc; it is nearly the same colour as gold, and is used for common watch cases, &c.

Q. What is zinc?

A. A metal of a brilliant white colour, with a shade of blue, extremely useful and valuable, as it mixes well with most other metals.

Q. What is verdigris?

A. It is that green stuff so often seen on dirty copper, and may be called its rust.

Q. Is it not a rank poison?

A. Yes; and this renders copper vessels very dangerous, unless kept perfectly clean.

Q. Where is there a large manufactory of verdigris?

A. At Montpellier in the South of

France, the husks of grapes are placed between copper plates, and the acid soon collects the rust.

Q. What is then done with it?

A. It is scraped off as it collects, afterwards dried, and put in bags or casks for sale.

Q. What is it principally useful for?

A. For dyeing a fine black, mixed with logwood; also for giving a beautiful green to porcelain, and for green paint, &c., &c.

Q. Is not copper of great use in covering or sheathing the bottoms of ships?

A. Yes; it preserves them from worms, and its smoothness is said to promote the swiftness of their sailing.

Q. What sort of metal is lead?

A. It is a coarse, soft, impure metal, but a very useful one.

Q. Whence have we lead?

A. Great Britain possesses the most important lead mines in the world,

the best known are in Flintshire, Derbyshire, Cornwall, Devonshire, Northumberland, and Durham.

Q. For what purpose is it generally used ?

A. Houses and churches are sometimes covered with lead; gutters, pipes, and cisterns, are also made of it.

Q. Is not this metal of a very poisonous quality ?

A. Yes; so much so, that in the neighbourhood where it is dug, neither dog, cat, nor fowl can be kept.

Q. What is white lead ?

A. It is made by holding thin plates of lead over heated vinegar.

Q. What does this process cause ?

A. The acid arising from the vinegar corrodes the lead, and is converted into a heavy white powder.

Q. What do you mean by corrode ?

A. It signifies to gnaw or eat away.

Q. By whom is white lead used ?

A. By house painters, who mix it with oil, to thicken and dry their paints.

Q. Is not white lead very prejudicial to health?

A. Yes ; being a slow poison.

Q. What is tin ?

A. A metal of a whitish colour.

Q. What county has been long noted for producing it ?

A. Cornwall ; so long as 700 years before the birth of Christ, the Phœnicians traded to this country for that article.

Q. Who were the Phœnicians ?

A. The inhabitants of the celebrated country of Phœnicia, in Asia, now called Syria ; Tyre and Sidon were the capital towns of this country.

Q. What celebrated Queen left her wicked brother Pygmalion, king of Tyre, and founded the celebrated city of Carthage.

A. Queen Dido.

Q. Are the uses of tin very considerable ?

A. Yes ; its freedom from rust renders it very valuable, for all vessels for the purpose of cooking.

Q. To whom do the tin mines of Cornwall pay a very considerable revenue ?

A. To the Prince of Wales, the eldest son of the King of England, as Duke of Cornwall, which is one of his titles.

Q. What is pewter ?

A. A composition made of lead and tin.

Q. What is its use ?

A. It was formerly much used for dishes and plates, but earthenware, which is much cleaner and pleasanter, has almost rendered it useless, except for the pots of the publicans.

Q. What is brass ?

A. A compound metal made of copper, zinc, and the calamine stone, which renders it yellow and hard.

Q. What is the calamine stone ?

A. A stone found plentifully in England, the Netherlands, and Germany.

Q. How is it procured ?

A. It is dug out of the ground,

roasted five or six hours, passed through a sieve, ground in a mill, and in this state is sold.

Q. Where is the great demand for it?

A. At Birmingham, for the brass foundries in that town.

Q. Where is the finest brass manufactured?

A. At Geneva, a fortified town, in a canton of the same name, in Switzerland.

Q. What is quicksilver, or mercury?

A. An imperfect metal, resembling melted silver, of great use in manufactures and medicine.

Q. Where is it found?

A. In Germany, Hungary, Italy, Spain, and South America.

Q. What does mercury form combined with tin?

A. The silvering of looking-glasses.

Q. What is vitriol?

A. A mineral salt; there are three sorts of vitriol, green, blue, and white.

Q. How is blue vitriol formed ?

A. By a combination of copper ; it is used by artists and manufacturers, and is employed in dyeing.

Q. Is not the beautiful grass-green colour of the chemists' shops, made from blue vitriol ?

A. Yes : and fowling pieces, and tea-urns are browned by washing them with a preparation of vitriol.

Q. What is white vitriol ?

A. It is formed by a combination of greenish white salt, with zinc.

Q. What is it used in ?

A. Medicine ; and varnishers and dyers use great quantities of it, to render deeper the colours produced by madder, cochineal, &c.

Q. What is Borax ?

A. A salt, of a brownish grey colour, and a sweetish taste, brought from Thibet, in the East Indies.

Q. Was not the art of refining it, kept for a long time a secret, by the Dutch, and Venetians ?

A. Yes : its uses are numerous ;

it is employed in making the finest glass, and jewellers use it for the better soldering of gold and silver ; it is also used in medicine.

Q. What is potash ?

A. It is a salt, or alkali, found in vegetable substances, obtained by burning them.

Q. Why is it called potash ?

A. From its having formerly been prepared in large iron pots.

Q. For what purpose is it used ?

A. In many arts and manufactures ; in scouring, washing, bleaching, dyeing, glass making, &c.

Q. What is pearl ash ;

A. It is only potash burnt red hot, which renders it whiter and more pure.

Q. What is fuller's earth ?

A. A well known clay, of a greenish yellow colour, very valuable for its property of taking grease out of woollen, and other cloths.

Q. What country is famous for it ?

A. England : and this enables us to bring our broad cloths to such perfec-

tion; as no other country produces fuller's earth equal to it.

Q. Might it not be used in most instances, as a substitute for soap?

A. Yes.

Q. What is pipe clay?

A. It is a fine common clay; tobacco pipes are made of it, by casting them in moulds, and it is used for many domestic purposes.

Q. Is it not the principal ingredient of the common yellow, or kitchen ware?

A. Yes.

Q. What is soda?

A. It is a salt, or alkali, like potash, obtained from sea-water, and different kind of plants, that grow on the seashores.

Q. Is it not sometimes called barrilla?

A. Yes, this is the Spanish name for it—it is principally used in making glass, and soap.

Q. What is soap?

A. It is made of soda, tallow, or oil,

mixed with other things, and is prepared by boiling.

Q. What is phosphorus?

A. A combustible substance, like bees'-wax in colour and consistence; it is not known in a native state, but is made by different artificial processes.

Q. Is it not bright and shining in the dark, when exposed to the air?

A. Yes, and when melted should be kept under water, for fear of its catching fire.

Q. What is the greater part of the phosphorus sold in the shops, obtained from?

A. From bones.

Q. What does combustible mean?

A. That which easily takes fire.

Q. What is Asbestos?

A. It is a silvery white mineral, of silky long slender filaments, which is found in mountainous countries abroad, and in Anglesea, and Scotland.

Q. What is the name derived from?

A. The Greek language, which sig-

nifies *inconsumable*, or not capable of being burnt.

Q. What was it called by the ancients?

A. Amicanthus; they made it into a kind of cloth, in which, they burned the bodies of their dead, and thus they were enabled to collect the ashes without mixture.

Q. How is this curious cloth cleansed, when greased, or dirty?

A. By throwing it into a clear, bright fire, the stains will burn out, and the cloth become of a dazzling, whiteness.

Q. Did not the Romans purchase this cloth at an enormous expense?

A. Yes: and Pliny tells us he had seen table-cloths, towels, and napkins made of it?

Q. What use is now made of it?

A. Chiefly small articles, by way of curiosity; such as caps, gloves, purses, and girdles, &c.

Q. What is pumice?

A. A light porous mineral, chiefly

brought from the neighbourhood of volcanos.

Q. What is it used for?

A. It is employed for smoothing the surface of wood, leather, metal, stones, glass, and other substances, and consequently is an article of considerable trade.

Q. From what places is it exported in great quantities?

A. From the Lipari islands, to the north of the island of Sicily, they are all of volcanic origin.

Q. What is marble?

A. A kind of stone, dug out of pits, or quarries, very hard, compact, and firm; capable of being most highly polished.

Q. Are there not various kinds of marble?

A. Yes: some are white, or black, others variegated with stains, clouds, waves, and veins, but all opaque.

Q. What is the meaning of opaque?

A. Not transparent, dark.

Q. What countries in Europe are famous for their fine marbles?

A. Greece, Italy, Spain, France, and Great Britain; the Black, and the pure brilliant white marble coming from Carrara, is most highly valued.

Q. Where is Carrara?

A. A town in the duchy of Massa, in Italy.

Q. Is not the Parian marble thought to be the purest and most lasting?

A. Yes; and it is in consequence used for the finest statues in marble.

Q. From whence is it procured?

A. From Paros, an island in the Archipelago; Phidias, and Praxiteles, two celebrated ancient statuarys, were natives of it.

Q. What fine Grecian statue, made of Parian marble, is still an object of wonder and delight?

A. The Medicean Venus.

Q. What English counties produce very beautiful marble?

A. Derbyshire, Devonshire, and Westmoreland; also the isle of Sky and Sutherland, in Scotland; and numerous other places.

Q. What is verde-antique?

A. A beautiful green marble, found only in Egypt; if it ever came from Italy, the quarries are not now known.

Q. What is porphyry?

A. It is a beautiful stone, found in quarries, or beds, of considerable magnitude.

Q. Where?

A. The principal quarries of porphyry are in Egypt; it is also found in various parts of Europe.

Q. Are there not many beautiful and splendid works in porphyry?

A. Yes: obelisks, statues, and columns; it can be polished as highly as marble; but it is so hard, that the expense of working it has caused it to be much neglected.

Q. What is alabaster?

A. It is a species of limestone, found in masses, hanging like immense icicles, from the roofs of caverns.

Q. Where is it found?

A. In most caverns in every country; those of Derbyshire are well known.

Q. Which is the most celebrated cave of this kind ?

A. That of Antiparos, in the Grecian Archipelago.

Q. What is it used for ?

A. To cut into vases, statues, tables, boxes, and other beautiful ornamental things.

Q. But is there not another kind of alabaster, called gypsum, which is made into chimney-pieces, columns, busts, vases, lamps, &c. ?

A. Yes : this gypsum is found in Cheshire, Derbyshire, and in many parts of the continent ; but that which is brought from Italy and Spain is the best.

Q. Was it not used by the ancients for windows ?

A. Yes, as it admitted a soft and pleasing light, without being transparent.

Q. What is plaster of Paris ?

A. It is alabaster heated till it falls into a soft white powder, which, when mixed with water, forms a paste called plaster of Paris.

Q. What is this employed for ?

A. In the making of casts, statues, &c. ; it is of a beautiful white colour, but very brittle.

Q. What is jasper ?

A. A variegated, very hard stone, with stripes and shades of yellow, red, green, and white, with black dots.

Q. What is it principally used for ?

A. It is made into vases, snuff-boxes, and other ornaments, as it will bear a very high polish ; also for pillars in very grand buildings.

Q. What country has very fine quarries of it ?

A. Spain.

Q. Where is it found ?

A. In the four quarters of the world ; Egyptian jasper is found near Suez, in Egypt ; Siberia produces a most beautiful kind, for ornaments ; and Tokay, in Hungary, and Constantinople, in Europe, produce it.

Q. What is lapis lazuli ?

A. A stone of a beautiful dark colour, with dots, which look like golden veins or spots.

Q. Where is it chiefly found ?

A. In Persia, Natolia; and China, Siberia and Tartary, in Europe it has only been discovered in Germany, and among the ruins of Rome.

Q. What is jet ?

A. A black opaque mineral, found in detached masses in several countries of the continent; it is often cast on the shores of England, in Norfolk, and Yorkshire.

Q. What is it valuable for ?

A. Trinkets; such as ear-rings, necklaces, &c., and in Roman Catholic countries, great quantities are used for rosaries and crosses.

Q. What is agate ?

A. The name of agate is derived from the river Achates, in Sicily, near which these stones were found in abundance by the ancients.

Q. Where are they now found ?

A. In Scotland, Saxony, and Hungary; and they are also brought from China, and the East Indies.

Q. What is it used for ?

A. In jewellery for seals, &c.; also

for magnificent cups, handles for splendid knives and forks, hilts for swords, and the tops of snuff-boxes.

Q. What are petrifications?

A. Substances immersed in water strongly impregnated with lime, which has the power of covering any thing laid in it with a strong coat.

Q. What well in England is celebrated for these curiosities?

A. The dropping well at Knaresborough, in Yorkshire.

Q. Is there not a curious specimen in the British Museum?

A. Yes; it is a human skull completely incrustated with stone, which was found in the river Tiber.

Q. What is coal?

A. A well-known black mineral, principally obtained from the neighbourhood of Newcastle upon Tyne, Sunderland and Whitehaven.

Q. Do not foreigners imagine that our great wealth arises from the abundance of coals we possess?

A. Yes, as they afford the great

means of carrying on all our valuable manufactures.

Q. When were coals generally adopted as fuel?

A. Not till the beginning of the reign of Charles I., though they are mentioned in the reign of Henry III.

Q. Are not the miners who work in the collieries, subject to dreadful accidents?

A. Yes: the greatest danger arises from the foul air of the pit, mixing with the common air, as then, upon the approach of a lighted candle, or any other flame, it explodes like gunpowder.

Q. What has sir Humphry Davy invented, to prevent the loss of so many valuable lives?

A. The safety lamp, which is formed of such fine wire, that, whilst it gives light, will not cause the gas to explode.

Q. What is gas?

A. A sort of inflammable air, found in many substances, but most plentifully in coal.

Q. Does it not produce a very brilliant light?

A. Yes, upon a candle, or light being applied to it; and it is now in consequence, generally used in our lamps, instead of oil.

Q. How do they convey it?

A. By laying iron pipes from the reservoirs, in which it is made, along the streets, under ground, and from these large pipes, small ones are conveyed into lamp posts and houses.

Q. What is cannel coal?

A. It is a peculiar coal, which gives a brilliant light, like a candle, found in the neighbourhood of Wigan, in Lancashire.

Q. Does not this coal afford the best gas?

A. Yes.

Q. What is gamboge?

A. A vegetable gummy juice, of a most beautiful yellow colour, chiefly brought from Cambodia, in the East Indies.

Q. What is its principal use?

A. It was formerly used in medicine, but its great value is in painting.

Q. What is vermilion?

A. A valuable red colour, formed of mercury and sulphur, melted together, and heated to redness.

Q. What is ultramarine?

A. The brilliant blue colour, so much esteemed by painters, and which we see so much used in the draperies of fine splendid pictures.

Q. What is it made from?

Lapis lazuli; small pieces of which are chosen, containing the most of this brilliant blue, which is burned or calcined to a fine powder, and made into a paste, with wax, linseed oil, &c.

Q. Is this all the preparation?

A. No, it is afterwards separated from these substances, by washing, and the powder is prepared with great trouble and attention.

Q. Does it not last fresher and better than any other colour?

A. Yes: for that sweet colour is often seen quite bright, when all the rest in a picture are faded.

Q. What is umber?

A. A paint of a brown colour, compounded from a kind of iron ore, found in beds, in the island of Cyprus.

Q. What is black chalk?

A. It is a soft, earthy substance, valuable to crayon painters, and other artists.

Q. Where is it found?

A. Great quantities are brought from France, Spain, and Italy; the best comes from the latter place.

Q. How is it prepared?

A. It is made into pencils, and they should be kept in a moist place.

Q. What is shagreen?

A. A kind of grained leather, prepared from the hides of asses and horses, but the proper shagreen is made from the skin of the shark or spotted dog-fish.

Q. What place is famous for the first of these manufactures?

A. Astracan, a city of Tartary, on the river Wolga, of great trade and importance to the Russians.

Q. But from what place do we get the real shagreen?

A. The best comes from Constantinople, but we have it from Irenis, Tripoli, and Algiers, in Africa.

Q. What renders it valuable?

A. It makes a strong covering for cases, books, &c.

Q. Is not the skin of the ass useful for many other things?

A. Yes, on account of its hardness and elasticity, it is made into heads of drums, leaves for pocket books, &c. The ass is much valued in Spain.

Q. Which are the most useful trees for cultivation?

A. The oak, elm, ash, beech, poplar, walnut, cheshut, and fir.

Q. What is the oak useful for?

A. Every part of this noble tree has its use; the trunk is sawed into planks, to build ships, and houses.

Q. Why is oak particularly used for ship-building?

A. Because no other wood is so durable in water.

Q. Is not the bark useful ?

A. Yes: the tanner and dyer could not do without it, to whom also the very saw-dust is serviceable.

Q. Are not the ashes of it even useful ?

A. Yes, to cleanse and purify wine, and for mixing with hard water, to soften it, for washing.

Q. What are the roots suitable for ?

A. Handles for hammers, knives, &c.

Q. Is the fruit called the acorn, fit be eaten ?

A. Yes: it supplies food for deer, and hogs; and when bruised, poultry will thrive upon it.

Q. Did not man, before the cultivation of corn, feed upon acorns ?

A. It is so said, for with the ancient Britons, they were in great request, and in times of scarcity, they would still prove a good substitute.

Q. Is not oak bark valuable in medicine ?

A. Very much so.

Q. Is not oak bark, also, in request for forming hot-beds, for the growth of pines?

A. Yes, and the branches of the oak, as well as of several other trees, are burned for charcoal.

Q. What kind of tree is the elm?

A. It is second only to the oak, in size and beauty.

Q. What is its wood particularly used for?

A. All purposes which are to bear the extremes of wet and dry; such as water-works, mills, pipes, pumps, and coffins.

Q. Are not frames for pictures, and other carved works, made of elm?

A. Yes, because it rarely warps.

Q. What do you mean by warp?

A. To swell, or shrivel, and bend as other wood does, when it is not dry.

Q. Have not the dried leaves of the elm been used as food for cattle?

A. Yes, when there has been a scarcity of hay, or other fodder. The young leaves will feed silk worms.

Q. Is not charcoal made of elm, nearly as good as that made of oak ?

A. Yes.

Q. Is not the ash, next to the oak, of most universal use ?

A. It is; for it serves the soldier for spear handles; the carpenter, wheel-wright, and cart-wright, for ploughs, axle-trees, harrows, &c.; and the waterman, for oars.

Q. Did the ancients make any use of the bark of the ash, and lime tree ?

A. Yes: before the invention of paper, they made use of the inner and finer bark, called philyra, for writing upon.

Q. Was it more durable than paper ?

A. It is supposed so, for there are manuscripts written on it still to be seen, though upwards of a thousand years old.

Q. Of what particular use is the bark to trees ?

A. It defends them from injury, and preserves them from cold.

Q. Why do evergreens preserve their leaves during the winter ?

A. Because their barks are of a more oily quality, than those of other trees.

Q. What is the wood of the beech tree used for ?

A. The upholsterer forms it into chairs, stools, bedsteads, &c. ; dishes and trays are also made of it.

Q. Is the bark of this tree useful for anything ?

A. Yes : for floats for fishing nets, instead of corks.

Q. Is it not very subject to the worm ?

A. It is ; and this unfits it for purposes where duration is requisite ; but for band-boxes, hat cases, &c., it is very useful.

Q. Are not the leaves said to be useful ?

A. Yes : when gathered in autumn, they have been said to make the best and easiest mattresses.

Q. In what countries are they much used for this purpose ?

A. In Denmark, and Switzerland; they will keep for seven or eight years, and are much superior to straw mattresses.

Q. Do not many creatures feed upon the fruit of this tree?

A. Yes: deer, squirrels, thrushes, blackbirds, and mice; it is also said to render the flesh of pheasants very delicate.

Q. Of what use is the poplar?

A. It is a very fast growing tree, useful for all sorts of white wooden vessels; it is very light, and makes soles, as well as heels for shoes.

Q. By whom is the walnut tree valued?

A. By the joiner and cabinet maker, for its beautiful colour and grain.

Q. What use do they chiefly make of it?

A. To embellish works, by inlaying them with this variegated wood.

Q. In what country is this wood in universal use?

A. In France.

Q. Is not the fruit of this tree in great request ?

A. Yes : before it is ripe it is made into a pickle, generally liked, and the nut when ripe is delicious.

Q. I think the chesnut is the next you mentioned ; what have you to tell me of that beautiful tree ?

A. It is valued by the carpenter, next to the oak ; many of our ancient houses in London were built of it.

Q. But has it not one great defect ?

A. Yes : it frequently appears sound without, but is decayed within ; which makes it yield to the oak in value.

Q. You have told me that ships are built of oak, but I cannot think that the body of an oak, is either tall or straight enough to make the masts ?

A. No : the masts are made of fir, or pine, which are tall straight trees.

Q. What country is famous for producing them ?

A. Norway, and the northern parts of Europe.

Q. What is the timber of these trees called ?

A. Deal; which is in so much use for floors and wainscots.

Q. Are these trees valuable for their timber alone?

A. No: turpentine, pitch, rosin, and tar, are made of them?

Q. How are these various articles obtained?

A. In the spring, they pare off the bark of the pine tree, and cut a hole at the bottom to receive the sap or juice, which then runs out freely.

Q. What does this form?

A. Common turpentine; it is chiefly brought from America and the Baltic.

Q. Is there not a thick matter which settles at the bottom of the still in which it is prepared?

A. Yes: and this is yellow rosin.

Q. Is the tree good for any thing when they have drained it of all its juice or sap?

A. Yes: for it is then cut down, and hewn into billets, with which they fill a pit dug in the earth, and then set them on fire.

Q. What purposes does this answer?

A. Whilst burning, there runs from them a black thick, matter, which is tar.

Q. What is pitch?

A. Only tar boiled with a certain quantity of water; sometimes an equal portion of coarse rosin is melted with it.

Q. What does pitch mixed with rosin and a small quantity of oil or tallow make?

A. Shoe-makers' wax.

Q. What does it form when mixed with whale fat?

A. Carriage grease.

Q. Are there not some other sorts of wood you have not mentioned?

A. Yea: the lime and the willow, box and holly.

Q. What is the lime, or linden, tree useful for?

A. It is chiefly used by carvers and turners, and for purposes such as pill-boxes, &c.

Q. When in blossom, do they not supply the bee with materials for their best honey?

A. Yes.

Q. What are willow twigs used for?

A. They are made into baskets, bird-cages, cradles, and all sorts of wicker work.

Q. Are not osiers a sort of willow?

A. Yes; they are a kind of low willow, found by the water side, used for making baskets, hampers, hurdles, &c.

Q. Must not the osier be peeled, when wanted to make fancy baskets, mats, &c.?

A. Yes: and the English excel in this work, for even in the time of the Romans, British baskets were among the luxuries of the Roman grandees.

Q. What sort of wood is box?

A. It is remarkable for its hardness, weight, and readiness to take a polish.

Q. What is it used for?

A. The turner finds it most valuable for mathematical instruments, pegs, screws, tops, chessmen, &c..

Q. What does the holly afford ?

A. The whitest wood of any ; it is hard and close-grained, and is much used in veneering and making dressing boxes, and other fancy works.

Q. What is bird lime ?

A. It is prepared from the bark of the holly, which is full of a slimy substance.

Q. Was the holly esteemed by the ancient Romans ?

A. Yes: it was customary with them to send branches of holly to their friends, with new years' gifts, as emblematical of *good wishes*.

Q. Do we not also, in some measure, keep up the old custom ?

A. Yes: for we decorate our houses and churches at Christmas with it, by way of rejoicing, and giving an air of spring in the depth of winter.

Q. What country produces that species of cedar, the wood of which is called mahogany ?

A. It is a noble and most beautiful tree, which abounds in the southern

parts of East Florida, and Honduras, and in the islands of Cuba, Jamaica, and Hispaniola.

Q. Where are these islands ?

A. In the West Indies, which are a set of islands in the Caribbean sea, between North and South America.

Q. Which island produces the finest mahogany ?

A. Jamaica ; it admits a high polish, and is generally used for tables, chairs, &c.

Q. Is not the profit arising from mahogany very great ?

A. Yes ; for one tree has been known to produce upwards of 1000*l.* sterling.

Q. What do cabinet-makers call the best mahogany ?

A. Spanish : from the settlements where it grows having belonged to the Spaniards : the inferior sort is called Honduras.

Q. Are there not many species of cedar trees ?

A. Yes : the ancients valued them very highly ; Solomon's temple and

palace were both built of this beautiful, sweet scented wood.

Q. What mountains were famous for these trees ?

A. Mount Libanus, in Turkey in Asia, between Syria Proper, and Palestine.

Q. Is there not a chain of mountains bearing this name ?

A. Yes : they are so high, that they are almost always covered with snow ; but the valleys are very fruitful.

Q. What did the ancients call this part ?

A. Cælo Syria ?

Q. Will this scented cedar wood bear any polish ?

A. No ; but on account of its powerful smell, it is much used for lining drawers and cabinets ; the smell also prevents moths, insects, &c.

Q. Was not the yew tree much cultivated by our ancestors ?

A. Yes ; for before the introduction of fire-arms, they manufactured their bows of this hard, smooth, tough wood,

Q. What is ebony ?

A. A black and valuable wood, found only in the centre of the tree ; the outside wood is white and soft, but it decays and leaves the black untouched.

Q. Where does it grow ?

A. In Ceylon and the East Indies ; it is much valued by cabinet-makers, for inlaying, and other ornamental work.

Q. What is the larch ?

A. An elegant tree ; a native of the Alps, Apennines, and the mountains of Germany.

Q. Do they not flourish best in clumps, and in a bad soil,

A. Yes ; else they become too luxuriant, and top heavy.

Q. Is it a very useful wood ?

A. Yes : the Russians use no other for ship-building, and it is well calculated for all works exposed to the weather.

Q. Will it not admit of a fine polish ?

A. Yes ; and contributes to give uncommon lustre to any colouring laid upon it.

Q. Do not the Italians make use of it for picture frames ?

A. Yes ; and this is the reason why the Italian gilding is so much better than ours.

Q. What great painter used it for his pictures ?

A. Raphael.

Q. Is not the wood of the laburnum very beautiful ?

A. Yes : it is like the dark colour of the cocoa-nut shell, when it is polished.

Q. What is rose-wood ?

A. A beautiful wood, of a dark colour, much used by cabinet-makers for fashionable furniture, in preference to mahogany.

Q. Where does it grow ?

A. In the island of Jamaica, and the Brazils, in South America.

Q. By what name is it known in the Brazils ?

A. It is called the Jacaranda tree.

Q. What is the teak tree ?

A. A most valuable timber tree, called the oak of the eastern world, employed generally there for ship-building.

Q. What renders it of such great value in India for ship building ?

A. Because the English oak tree will not grow there; it is not injured by the water, and its bitterness preserves it from worms.

Q. Of what place in India is it a native ?

A. Of Pegu; but it flourishes luxuriantly on the coast of Malabar, and about Calcutta, and in all parts of Bengal.

Q. Is it not of very rapid growth ?

A. Yes: and at all ages the wood appears excellent, which is very different to the oak, which requires so many years to arrive at perfection.

Q. What is sandal-wood ?

A. An Indian tree of Siam, and the coast of Malabar; it is burnt in small billets in India, on account of the fra-

grance.

Q. Is it not also used for many purposes of ornament?

A. Yes: fans, tooth-pick cases, and many toys are made of it, and a most exquisite perfume is extracted from it.

Q. Is it not sometimes used by the Chinese, for coffins for their great men?

A. Yes: and they perfume both their persons and houses with it.

Q. What is satin-wood?

A. The wood of a beautiful tree growing in the Brazils, and the island of Jamaica, much valued by upholsterers for inlaying.

Q. What is the plane tree?

A. A noble tree, much valued by the Greeks and Romans, on account of its grateful shade; they planted avenues of it to all their magnificent buildings.

Q. Is it a hardy tree?

A. Yes: it grows rapidly, and will flourish in any common soil.

Q. What is the sycamore tree?

A. A very handsome tree, which it

is remarkable, flourishes best near the sea, the spray from which does not injure it.

Q. What is the common maple?

A. A low tree, common in woods and hedges, so much valued by the Romans, that they gave an extravagant price for it for their tables.

Q. If the Romans reproached their wives for extravagance in jewels, &c., what used the latter to do?

A. To "*turn the tables*" upon their husbands, that is, to put them in mind of what they spent upon their tables, of this wood.

Q. Is it not a very light wood?

A. Yes; and on that account it is often used for violins, and musical instruments.

Q. Is there not a tree called the sugar maple?

A. Yes; a large and beautiful tree of North America; it yields a sweet juice, which is made into sugar.

Q. What is the cypress tree?

A. A dark evergreen tree, which

takes its name from the island of Cyprus, in the Mediterranean, where it still grows in great luxuriance.

Q. To what heathen god is it consecrated, on account of its gloomy appearance ?-

A. To Pluto; it was used at the funerals of people of eminence, and branches of it were placed before the houses in which persons lay dead.

Q. Was it valued as a wood by the ancients ?

A. Most highly : it takes a fine polish, is of a pale reddish colour, with deep veins, and is very durable.

Q. What famous doors were formed of it ?

A. Pliny tells us, the doors of the temple of Diana, at Ephesus, were made of it, and 400 years old when he wrote, and as fresh as new.

Q. Were not the gates of St. Peter's at Rome, said to be of cypress ?

A. Yes ; and were more than a thousand years old, when they were removed to be replaced by brass ones.

Q. What is bamboo ?

A. An Indian reed full of dark spots, which look like joints ; they sometimes grow to the height of a hundred feet ; they are also found in some parts of America.

Q. What is their principal use ?

A. The ancients valued them for their sweet juice, which served them for sugar, and the young shoots they pickled.

Q. When the stalks were old, did they not use them in building ?

A. Yes, as well as for making many articles of furniture ; and as the reed is quite hollow, they served them also for water pipes.

Q. What is done with the lesser stalks ?

A. They are made into a great variety of ornamental walking canes, called rattans ; and the people of Otaheite make flutes of them.

Q. Are there not a great variety of foreign animals, whose skins and furs are very valuable ?

A. Yes: their fur is used for muffs, tippets, flounces, linings for mantles, hammer-cloths, &c.; and their skins are prepared by the tanner, into leather.

Q. Which are the most valuable furs for muffs, &c.?

A. The ermine, sable, and chinchilla.

Q. What sort of animal is the ermine, or stoat?

A. A beautiful little creature, resembling the weasel, found in the northern parts of Siberia, Russia, Norway, and Lapland.

Q. How are they caught?

A. Generally in traps baited with flesh; but they are sometimes shot with blunt arrows, that their skins may not be injured.

Q. When do they hunt them?

A. In the winter, because their hair, which is as yellow as gold in summer, then turns as white as snow, except the tip of their long and bushy tail, which is as black as jet.

Q. Does not this circumstance often allow them to escape from their enemies ?

A. Yes: for being of the colour of the snow of those cold countries, they are not very easily seen.

Q. Is not this a proof of the kindness of Providence, for all his creatures ?

A. Yes.

Q. Why is the fur of these little animals so highly valued ?

A. Because for many centuries past they have been used for lining the robes of our kings and nobles ; and the black tips of the tails are very ornamental, valuable, and beautiful.

Q. Do not the ladies have muffs, tippetts, &c., of ermine.

A. Yes.

Q. Why are they so expensive ?

A. Because it takes so many skins to make any thing ; each little tail belongs to a whole skin.

Q. What is the sable ?

A. A small animal resembling the

martin and weasel ; the fur is very valuable, and of a deep glossy brown, black at the ends.

Q. Where are they found ?

A. In Siberia, Kamschatka, the vast forests of Russia, and in the northern parts of America.

Q. How are these animals taken ?

A. Generally in traps or snares, to avoid hurting their skins, which are sold for large sums.

Q. Are not the dark skins the most esteemed ?

A. Yes ; their value greatly depends upon their colour.

Q. By whom is this animal hunted ?

A. Either by criminals whom the Russian government has banished, or by soldiers sent for that purpose.

Q. Do not these hunters go through great hardship, fatigue, and peril ?

A. Yes ; for they hunt them in the winter, as their skins are then in the highest perfection, and the cold they have to endure is intense.

Q. Are they sprightly, active little creatures ?

A. Very much so: they form holes, or burrows under ground, where they repose all day, and ramble about all night.

Q. Are sable muffs, tippets, and trimmings, much esteemed?

A. Yes; and very expensive.

Q. You have mentioned the martin, what sort of animal is it?

A. A small quadruped, of the weasel tribe, about eighteen inches long, valuable for its fur.

Q. What is its colour?

A. A blackish tawny colour; the most valuable part of the skin is that which extends along the middle of the back.

Q. What is it used for?

A. It is in great request in Europe, for lining and trimming the robes of magistrates; and the Turks, who are very choice in their furs, particularly admire it.

Q. From whence are these skins imported?

A. Principally from Hudson's Bay,

and Canada ; like the ermine and sable, they are the finest in winter.

Q. What is the chinchilla ?

A. A small creature of the rat tribe, which has a beautifully soft grey fur.

Q. Where does it come from ?

A. It is a native of South America ; and the Peruvians used to spin the hair of it into a fine delicate wool, which they valued highly.

Q. Has not the skin of the chinchilla of late years been in much request in this country ?

A. Yes : in consequence of its having become a fashionable and favorite article for ladies' muffs.

Q. Do not swan's-down muffs and tippets rank next after these valuable furs ?

A. Yes : these delicate articles are formed of the skin of the wild swan, dressed with the down upon them.

Q. Were not these stately birds highly esteemed by our ancestors ?

A. Yes : at Archbishop Neville's feast in the reign of Edward the

Fourth, four hundred of these birds were dressed.

Q. Do they eat them now ?

A. No : only the cygnets, or young swans ; great numbers of these are fattened near Norwich, at Christmas, for the table of the corporation.

Q. What is eider-down ?

A. The fine white down which grows upon the breast of the eider duck.

Q. How is it procured ?

A. They plunder the nests of these affectionate creatures, who pluck it from their own breast to line them.

Q. What is its use ?

A. To stuff cushions or pillows, and for making beds, which are used in very cold countries instead of a common quilt.

Q. Where are these birds found ?

A. In the northern parts of Europe, Asia, and America ; they form their nests on small islands not far from the sea shore.

Q. Have not squirrel skins been

much in request of late for muffs and tippets?

A. Yes: but there are a great variety of squirrels; the red, grey, black, and white; the grey skins used in England for muffs, come in large quantities from Russia and Siberia.

Q. Is not the skin of the fitch, or pole-cat, used for common muffs, &c.?

A. Yes: it is a small animal, the hair coarse, and of two colours, the middle being tawney and the ends black. It is said to breed the moth.

Q. Where are they imported from?

A. Germany and Poland.

Q. Are bear skins very useful?

A. Yes: of all coarse furs these are the most valuable; at Petersburg and Moscow, they form one of the most costly articles in the winter wardrobe of a man of fashion.

Q. What is the colour of bear-skin?

A. Black; except in Greenland, where he is always white.

Q. To what purposes are they applied in this country?

A. A few years ago they were fashionable for muffs, but now they are in esteem only for hammer-cloths, housings, caps, gloves, &c.

Q. What do you mean by housings?

A. Horse-cloths, put under the saddles of military men, and other ornaments of a cavalry horse, such as pistol-holsters, &c.

Q. From whence are bears' skins usually imported?

A. From North America, though they are found in Europe, Asia, and India.

Q. Is not the hunting of bears a principal employment for the inhabitants where they are found?

A. Yes: and it is a most profitable pursuit?

Q. Is not the leather made from bears' skins very useful?

A. Yes: it is made into harness for carriages, and other purposes where strength is required.

Q. Is not every part of the bear useful?

A. Yes: its flesh is excellent food, something like pork; its paws are esteemed a great delicacy, even at the emperor's table, and the hams are salted and dried, and sent to all parts of Europe.

Q. Is not the fat even valuable?

A. Yes: an oil is made from it, used for making the hair grow, and it has been found a remedy for the rheumatism?

Q. Do not the Russians and Kamshatkans esteem it as good as olive oil with their food?

A. Yes.

Q. What are fox skins?

A. A soft and warm brown fur, which in many parts of Europe is used for muffs and tippetts, for the lining of winter garments, and for robes of state.

Q. Is not this animal found in almost every country of the world?

A. Yes: but the fur that is principally brought to this country comes from North America.

Q. Are there not black, grey, blue, red, and white foxes?

A. Yes; but the black is reckoned the most valuable, on account of its scarcity and beauty.

Q. Is not fox-hunting a favorite diversion in this country?

A. Yes.

Q. What is the badger?

A. A small animal of the bear tribe, covered with long coarse hair like bristles.

Q. For what purpose is its skin useful?

A. When dressed with the hair on, it makes excellent knapsacks, and covers for travelling trunks, &c.

Q. Are not the hairs or bristles made into brushes for painters?

A. Yes: and this animal is found in the woody parts of England and Europe; and it is about the size of a small pig.

Q. What are leopard skins esteemed for?

A. Principally as furniture for war-horses, hammer-cloths, &c.; the skin is very beautiful, of a deep yellow

colour, sprinkled over with black or dark spots.

Q. Of what country is the leopard a native ?

A. Of Africa ; it is found principally in Senegal and Guinea ; but there are leopards in Persia, India, and China.

Q. Is it not extremely savage ?

A. Yes : and it is caught like the tiger and lion, by digging deep pits, which are lightly covered over.

Q. Is it not a mark of the kindness of the Creator, that these savage beasts go in search of prey during the night ?

A. Yes ; for in the day, when man is abroad, they usually sleep in their dens.

Q. What are the seal skins used for ?

A. The covering of trunks and making of caps ; they are a large marine quadruped, caught in the north and south polar seas.

Q. Where are they usually found ?

A. In the hollow of rocks or caverns near the sea.

Q. Are not these animals very watchful ?

A. Yes, they seldom sleep longer than a minute without moving, for having no external ears, they would otherwise be liable to surprise from enemies.

Q. Are not seal skins made into a valuable leather for shoes?

A. Yes.

Q. What does the wolf afford us?

A. Nothing valuable but his skin, which makes a warm and durable fur : he is a ferocious animal of the dog tribe.

Q. Were not wolves once very numerous in England?

A. Yes : but by the care of King Edgar, and Edward I., they were entirely destroyed.

Q. Was not the skin of the lion considered a badge of great honour?

A. Yes, it was formerly used as the tunic of heroes ; it now serves both as a mantle and bed for many of the African tribes.

Q. What do you mean by a tunic?

A. A sleeveless coat or vest.

Q. Did not the Romans tame this noble beast in a wonderful manner?

A. Yes: for Marc Antony, the Roman triumvir, was publicly drawn in his chariot by lions.

Q. What people value tiger skins very highly?

A. The Chinese: the mandarins cover their seats of justice, and sedans with them, and use them for cushions and pillows in the winter.

Q. Have not the great military officers of China, the figure of a tiger embroidered on their robes?

A. Yes; and there could not be found a better symbol of the evils and horrors of war.

Q. Is not the skin of the lynx thought valuable?

A. Yes: for it is a thick soft fur, and when the spots are tolerably distinct, the skins are sold at high prices.

Q. What sort of animal is it?

A. Of the cat tribe, but four times as large as the common cat.

Q. Where are they found?

A. In the woods and forests of the northern parts of Europe, Asia, and America.

Q. Are not the skins of cats, a very considerable branch of commerce in some countries?

A. Yes: as furs, they are valued for some purposes, but those of the Spanish cats are most esteemed.

Q. What people export a great many of them?

A. The Russians; they even send them into China.

Q. Is not the hair of the wild cat very long, and of a fine white grey?

A. Yes: they are a savage, formidable animal, found wild in the woods of Europe, Asia, and America.

Q. Were not cats considered as sacred objects, by the Egyptians?

A. Yes, and whoever accidentally killed one was liable to severe punishment.

Q. What story does Herodotus, the Greek historian, tell us about this?

A. That whenever a cat died a

natural death, the inhabitants of the house used to shave their eye-brows, in token of sorrow.

Q. And what was done with the animal?

A. It was embalmed, and nobly interred.

Q. What is the ichneumon?

A. A quadruped, found in Egypt and Asia, being in both places highly valued

Q. Why?

A. Because it is the natural enemy of the whole serpent race; it will fight the most venomous of them, and seize them by the throat without receiving any injury itself.

Q. Is it not also a great enemy to the crocodile?

A. Yes, for it digs its eggs out of the sand, and kills and devours great numbers of the young ones.

Q. For these services was it not ranked by the ancient Egyptians amongst their deities?

A. Yes: and received divine honours.

Q. Was this formidable creature easily tamed ?

A. Yes, and was kept in houses like a cat, and destroyed the rats and mice in the same manner.

Q. What is the ostrich ?

A. An immense bird, found in Asia, and Africa.

Q. What is it valuable for ?

A. The Arabs hunt it for the sake of the feathers of its wings and tail, which are a great article of traffic.

Q. What are these feathers esteemed for ?

A. They are used for female head-dresses, and for the plumes in officer's hats, &c.

Q. What is the bird of Paradise ?

A. A most beautiful bird, found in New Guinea, and the adjacent islands of Aroo.

Q. How are they caught ?

A. They are shot with blunt-headed arrows, or taken by bird-lime, or in snares.

Q. What do they do with them as soon as they are killed ?

A. They cut their legs off, take out their inside, and dry them with smoke; they then send them to Banda, and other settlements, for sale.

Q. What people value them very highly ?

A. The Persians and Indians: in these countries they adorn the turbans of persons of rank, the handles of sabres, and the trappings of horses.

Q. Were there not some extraordinary ideas of this bird ?

A. Yes; it was thought they had no legs, that they were constantly flying, and never touched the earth till their death, and that they fed only on dew.

Q. How did these ridiculous notions arise ?

A. Probably from the beautiful nature of their plumage, and their being sold without insides, or legs.

Q. What is the lamprey ?

A. A small eel-shaped fish, much esteemed by epicures, particularly when potted or stewed.

Q. Which of our kings died from eating too heartily of them?

A. Henry the First.

Q. What river is celebrated for them?

A. The Severn, and it is the custom of the city of Gloucester, to present to the king, at Christmas, a lamprey pie, with a raised crust.

Q. Did not the Romans set a high value on eels?

A. Yes: they considered them one of the greatest delicacies for their tables, and they were preserved, and fed with the greatest care.

Q. Where are they found?

A. In both salt and fresh waters, in almost every country of Europe.

Q. What sort of creature is the locust which we read of in the Old and New Testament?

A. It is an insect not much unlike,

a large grasshopper, very common in most of the eastern countries.

Q. Are they not eaten by many of these people?

A. Yes; and the Hottentots and African tribes delight in them; they make their eggs into a kind of soup, and boil the insects in milk.

Q. Is not the peacock a beautiful creature?

A. Yes; they have always been valued, and were among the treasures of the east, sent to King Solomon.

Q. Did not the Romans esteem them highly for the table?

A. Yes, and in England the young pea-fowls are now thought a great delicacy.

Q. By what people are their feathers much valued?

A. By the Chinese, for decorating the caps of the mandarins, and for ornamental works.

Q. How many feathers are there in the peacock's crest?

A. Twenty four; in ancient times their crests were among the ornaments of the kings of England.

Q. Pray what is the nautilus?

A. A very scarce and curious shell, shaped like a ship; the fish that steers this little bark is wondrously made.

Q. Pray describe it?

A. It has eight legs, of different length and form; these it uses as oars and rudder, and a skinny membrane it raises, to ply the wind.

Q. How does it manage its little vessel?

A. In fine weather it sails along boldly; but if fearful of danger, it returns to its shell, and sinks to the bottom.

Q. Is it not supposed that men first took the idea of sailing from what they saw done by this little creature?

A. Yes: and the word nautilus is formed from the Greek word naus, a ship, or nautes a sailor.

Q. Is not the pinna marina very curious?

A. Yes: it is a muscle, found on the Calabrian coast, sticking to the rocks.

Q. What are its habits?

A. When in search of food, it throws out on the surface of the sea, a beard of the most silky and brilliant appearance, which looks like liquid gold.

Q. What is found in this curious beard?

A. Within its meshes small fish are caught, and every separate tuft contains a little crab.

Q. What are these crabs called?

A. The watchman of the muscle, for they give notice if an enemy approach, when the muscle directly draws in its shining beard, and guard, along with it.

Q. Is not the polypus a great enemy to the pinna?

A. Yes, it watches its opportunity when the pinna is in quest of its prey, and chucks a small pebble close to the hinge of the shell, by which it prevents the poor pinna closing it.

Q. I suppose it is then soon made an easy victim?

A. Yes.

Q. Is it not said that Lord Nelson, when stationed on the Sicilian coast, had a ~~muff~~ presented to him, made entirely of the tufts of this beautiful beard?

A. Yes: and the value of it was estimated at five hundred pounds.

Q. What was the origin of the figure of Britannia?

A. The Romans, who recorded all events on medals, cast it to signalise their conquest over our island.

Q. Has it not been preserved as testifying their high opinion of us?

A. Yes: the warlike nation of Britain is shown by the female's accoutrements; she sits upon a rock, or a globe, and the waves of her island-home, beat upon her feet.

Q. What do her spear and shield denote?

A. The military genius of her coun-

try, and her power to defend her freedom, and her rights.

Q. Was the lion assigned her by the Romans?

A. No; it was added afterwards, probably to denote the magnanimous character of her hardy sons.

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